NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

JOINT APPLIED PROJECT

Analysis of the Training Provided to First-Time Military Acquisition Professionals at Marine Corps Systems Command

---

By: **Joseph R. Shusko**

June 2010

Advisors: **Keith B. Snider,**
Robert A. Forrester

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.			
1. AGENCY USE ONLY ***(Leave blank)***	**2. REPORT DATE** June 2010	**3. REPORT TYPE AND DATES COVERED** Joint Applied Project	
4. TITLE AND SUBTITLE: Analysis of the Training Provided to First-Time Military Acquisition Professionals at Marine Corps Systems Command		**5. FUNDING NUMBERS**	
6. AUTHOR(S): Joseph R. Shusko			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000		**8. PERFORMING ORGANIZATION REPORT NUMBER**	
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A		**10. SPONSORING/MONITORING AGENCY REPORT NUMBER**	
11. SUPPLEMENTARY NOTES: The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. IRB Protocol Number: NPS.2010.0010-IR-EP7-A. Amended Protocol Number, NPS.2010.0020-AM01-EP7-A.			
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release, distribution is unlimited		**12b. DISTRIBUTION CODE**	

13. ABSTRACT (maximum 200 words):

The purpose of this Joint Applied Project was to investigate and provide appropriate recommendations to the Marine Corps Systems Command (MARCORSYSCOM) on how to most effectively train first-time military acquisition professionals in the Defense Acquisition System. This research was conducted with the support and assistance of MARCORSYSCOM's Workforce Management and Development office, as well as support from individuals representing both the Naval Postgraduate School and Florida Institute of Technology. The goal of this project was twofold. First, the research was aimed at conducting cost-benefit and gap analyses of the various training opportunities available to current and former acquisition professionals. Data collection for this was conducted primarily though a survey sent to current and former military officers filling acquisition billets. After determining the course providing the command the best value, the research focused on identifying opportunities to address the residual gaps in training. Recommendations to address residual gaps were then identified and documented for the future use of MARCORSYSCOM.

14. SUBJECT TERMS: MARCORSYSCOM, Acquisition Professional, Defense Acquisition University (DAU), Defense Acquisition Workforce Improvement Act (DAWIA), Naval Postgraduate School (NPS), Florida Institute of Technology (FIT)			**15. NUMBER OF PAGES** 157 **16. PRICE CODE**
17. SECURITY CLASSIFICATION OF REPORT Unclassified	**18. SECURITY CLASSIFICATION OF THIS PAGE** Unclassified	**19. SECURITY CLASSIFICATION OF ABSTRACT** Unclassified	**20. LIMITATION OF ABSTRACT** UU

NSN 7540-01-280-5500 Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. 239-18

THIS PAGE INTENTIONALLY LEFT BLANK

Approved for public release; distribution is unlimited

ANALYSIS OF THE TRAINING PROVIDED TO FIRST-TIME MILITARY ACQUISITION PROFESSIONALS AT MARINE CORPS SYSTEMS COMMAND

Joseph R. Shusko, YA-2, United States Marine Corps Systems Command

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN PROGRAM MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
June 2010

Author: _____
Joseph R. Shusko

Approved by: _____
Keith Snider, Lead Advisor

_____
Robert Forrester, Support Advisor

_____
William Gates, Dean
Graduate School of Business and Public Policy

THIS PAGE INTENTIONALLY LEFT BLANK

ANALYSIS OF THE TRAINING PROVIDED TO FIRST-TIME MILITARY ACQUISITION PROFESSIONALS AT MARINE CORPS SYSTEMS COMMAND

ABSTRACT

The purpose of this Joint Applied Project was to investigate and provide appropriate recommendations to the Marine Corps Systems Command (MARCORSYSCOM) on how to most effectively train first-time military acquisition professionals in the Defense Acquisition System. This research was conducted with the support and assistance of MARCORSYSCOM's Workforce Management and Development office, as well as support from individuals representing both the Naval Postgraduate School and Florida Institute of Technology. The goal of this project was twofold. First, the research was aimed at conducting cost-benefit and gap analyses of the various training opportunities available to current and former acquisition professionals. Data collection for this was conducted primarily though a survey sent to current and former military officers filling acquisition billets. After determining the course providing the command the best value, the research focused on identifying opportunities to address the residual gaps in training. Recommendations to address residual gaps were then identified and documented for the future use of MARCORSYSCOM.

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

LIST OF FIGURES

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF TABLES

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF ACRONYMS AND ABBREVIATIONS

AAP	Advanced Acquisition Program (as pertaining to NPS)
AAP	Abbreviated Acquisition Program
ACAT	Acquisition Category
AC LCL	Assistant Commander for Life Cycle Logistics
AC PROG	Assistant Commander for Programs
ACQ	Acquisition Core and Senior
AFSS	Armor and Fire Support Systems
ANSI	American National Standards Institute
APB	Acquisition Program Baseline
APD	Advanced Professional Development
AT&L	Acquisition, Technology and Logistics
BAH	Basic Allowance for Housing
BAS	Basic Allowance for Subsistence
BLS	Bureau of Labor Statistics
Capt	Captain
CESS	Combat Equipment and Support Systems
C-IED	Counter-Improvised Explosive Device
CINS	Communication, Intelligence and Networking Systems
Civ	Civilian
CL	Continuous Learning
CLB	Continuous Learning, Business
CLC	Continuous Learning, Contracting
CLE	Continuous Learning, Engineering and Technology
CLM	Continuous Learning, Acquisition and Management
Col	Colonel
CON	Contracting and Procurement
COTS	Commercial-off-the-Shelf
CPI	Consumer Price Index
CWO	Chief Warrant Officer

CY09$	Calendar Year 2009 Dollars
C2	Command and Control
DACM	Defense Agency Director, Acquisition Career Management
DAU	Defense Acquisition University
DAWIA	Defense Acquisition Workforce Improvement Act
DC SIAT	Deputy Commander for Systems Engineering, Interoperability, Architecture and Technology
DFARS	Defense Federal Acquisition Regulation Supplement
DoD	Department of Defense
DSAM	Defense Systems Acquisition Management
DSMC	Defense Systems Management College
ELDP	Executive Leadership Development Program
EVM	Earned Value Management
FAR	Federal Acquisition Regulation
1stLt	First Lieutenant
FIT	Florida Institute of Technology
FY	Fiscal Year
GAO	United States General Accounting Office
GTES	Ground Transportation and Engineer Systems
GySgt	Gunnery Sergeant
IPT	Integrated Product Team
IRM	Information Resources Management
ISI	Information Systems and Infrastructure
IWS	Infantry Weapon Systems
JCIDS	Joint Capabilities Integration Development System
JPEO	Joint Program Executive Office
LAV	Light Armored Vehicle
LOG	Acquisition Logistics
LtCol	Lieutenant Colonel
MAGTF	Marine Air-to-Ground Task Force
Maj	Major
MARCORSYSCOM	Marine Corps Systems Command

MC2I	MAGTF C2 Weapons and Sensors Development and Integration
MGT	Management
MGySgt	Master Gunnery Sergeant
MOS	Military Occupational Specialty
MRAP	Mine Resistant Ambush Protected
MSgt	Master Sergeant
NSPS	National Security Personnel System
OFS	Operational Forces Systems
PBL	Performance Based Logistics
PCPM	Project Contract and Procurement Management
PCS	Permanent Change of Station
PEO	Program Executive Office
PG	Product Group
PLC	Project Leadership and Communication
PM	Program Manager
PMBOK	Project Management Body of Knowledge
PMC	Project Management Certificate
PMCD	Program Management Career Development
PMI	Project Management Institute
PMP	Project Management Process
PMT	Acquisition Program Management
POM	Program Objectives Memorandum
PPBE	Planning, Programming, Budgeting and Execution
PQM	Manufacturing, Production and Quality Assurance (as pertaining to DAU)
PQM	Project Quality Management (as pertaining to FIT)
PRM	Project Risk Management
PSCC	Project Schedule and Cost Control
SAM	Software Acquisition Management
SBT	Strategic Business Team
SELM	Systems Engineering and Logistics Management
SEP	Special Education Program

Sgt	Sergeant
SOO	Statement of Objectives
SOW	Statement of Work
SSgt	Staff Sergeant
SYS	Systems Planning, Research, Development and Engineering
TIGER	Total Information Gateway Enterprise Resources
TLCSM	Total Life Cycle Systems Management
TRASYS	Training Systems
TST	Test and Evaluation
TY$	Then-Year Dollars
UGV	Unmanned Ground Vehicle
VTC	Video Teleconference

ACKNOWLEDGMENTS

The author would like to offer special thanks to the following individuals: To my advisors, Keith Snider and Bob Forrester, your sound guidance and timely feedback was essential in the completion of this research. My Program Manager, Eric Miller, for allowing and encouraging me to pursue this educational opportunity. To those who offered information and facilitated the research, namely Paul Battaglia of Florida Institute of Technology and Kelly Sims of Marine Corps Systems Command. Your support was critical in this research. For coming up with such a great topic, and then allowing me to continue with it when you no longer could, Major Anthony "FES" Krockel cannot be thanked enough. Finally, I have to thank my wife, Kelly, for her encouragement and support, without which I would have never completed this research.

THIS PAGE INTENTIONALLY LEFT BLANK

I. INTRODUCTION

A. BACKGROUND

During the course of this research, tens of thousands of Marines were fighting a two-front war, deployed and engaged in combat operations in both Iraq and Afghanistan, and they have been for the past seven years. In support of Marines and Marine Forces participating in Operation Iraqi Freedom and Operation Enduring Freedom, one organization of merely 1,000 employees is responsible for procuring, fielding, training and supporting *all* the countless pieces of equipment required. With only one third of its population active duty service members, the experience and perspective of the Marines assigned to Marine Corps Systems Command (MARCORSYSCOM) are critical in the delivery of effective material solutions to warfighters in combat.

Unfortunately, the demand of being deployed fighting two wars requires that the Marines of MARCORSYCOM rotate back to deployable units every two to three years. As such, the time that an individual Marine spends within the command is extremely valuable. The potential influence each Marine has on his or her civilian co-workers and the operational experience they bring to the command and the acquisition process is immeasurable … that is, once they are able to effectively understand and negotiate the complicated Defense Acquisition System.

Understanding that a majority of the Marines assigned to MARCORSYSCOM are performing acquisition for their first time, the quicker they learn the skills necessary to be effective, the more benefit they can provide. If it takes a Marine 12 months to learn what is necessary to be effective, he or she has potentially lost up to *half* of his or her value to the command! Therefore, effective and efficient training is absolutely essential to ensure a new military acquisition professional contributes at his or her maximum potential. The question then becomes, what training opportunity provides Marine Corps Systems Command with the most educational value at the least cost, both in terms of financial cost and loss of value?

B. RESEARCH OBJECTIVE

The primary objective of this research project was to identify all current and former methods of training military acquisition professionals at Marine Corps Systems Command and conduct a cost-benefit and gap analysis of each. The analysis led to the determination of the training method that provides the best value to the command and its acquisition population. In addition to identification of the most effective training method, research further determined and documented the skills necessary to be an effective acquisition professional and analyzed in what ways the selected training method falls short. Finally, data collected from survey results as well as various training opportunities was utilized to identify and recommend an effective means of providing additional instruction to address the skills less than adequately trained by the preferred primary training method. Recommendations for improvement were made and for consideration by MARCORSYSCOM's Workforce Management and Development office for consideration.

C. METHODOLOGY

The methodology utilized in this research was heavily dependent on data collected from current and former military acquisition professionals through the use of an online survey. Careful consideration was given to the questions utilized in the survey, specifically the identification of the skills deemed necessary to be an effective acquisition professional. The value survey participants gave to each skill was identified and formed the basis for further analysis of training methods. Subsequently, survey participants were asked questions about the training opportunities they experienced, to include identification of how well their specific training covered the skills they previously rated. Based on analysis of the survey results, a relative value of the various training methods from the student's perspective was determined. This value was then validated or refuted based on various resources collected about the training opportunities.

With an overall value associated with each of the training opportunities, a cost analysis was conducted looking at both the direct costs, such as tuition and transportation, and indirect costs, such as opportunity cost of course participation. When combined with

the relative value of the training method, a determination was made as to which training track provided the command and the student with the best valued instruction to become an effectively trained military acquisition professional within the two- to three-year time constraints of his or her first tour. Certain assumptions (included in Chapter V) were necessary in order to adequately normalize the various training methods to facilitate reasonable analysis and comparison.

Finally, as no one method of training was capable of providing acquisition professionals with all the skills they deem necessary, analysis of the residual skills and the training necessary to provide them was conducted.

D. ORGANIZATION OF STUDY

Research for this project is organized into six chapters presented in the following manner:

Chapter I introduces the educational challenge faced by active duty acquisition professionals and MARCORSYSCOM. It further describes the objectives and methodology used to analyze the challenge.

Chapter II provides background information about MARCORSYSCOM, its workforce and purpose, as well as general descriptions of the various training opportunities currently in use and those used in the recent past. Four training opportunities are presented for further analysis: the Project Management Certificate (PMC) course offered by the Florida Institute of Technology (FIT), the Advanced Acquisition Program (AAP) offered by the Naval Postgraduate School, courses and Continuous Learning (CL) Modules offered by Defense Acquisition University (DAU), and the Marine Corps Systems Command sponsored Mentorship Program.

Chapter III presents specific data collected on MARCORSYSCOM, as well as each of the four training opportunities. Data collected for each formal training opportunity is further organized by its schedule and curriculum and its cost, in order to support the cost-benefit analysis. A program description is provided for the mentorship program, as it is not formalized training with constant teaching objectives.

Chapter IV contains results of a survey created and released by the researcher aimed at gathering feedback on the value of training methods from the perspective of the MARCORSYSCOM employee. All responses presented were provided by current and former military acquisition professionals between the ranks of Chief Warrant Officer and Major.

Chapter V contains the analysis of all the data presented in the previous three chapters. The analysis results in an identification of the required skills, how well each training method teaches those skills, along with the total cost associated with each training method.

Chapter VI contains an overview of the research conducted as well as a series of conclusions and recommendations aimed at assisting MARCORSYSCOM in the improvement of its new employee training process.

II. BACKGROUND

A. MARINE CORPS SYSTEMS COMMAND

1. Organization

Marine Corps Systems Command (MARCOSYSCOM) is the Marine Corps' only systems command, responsible for the procurement of all ground- and sea-based equipment used by the Marine Corps (Naval Air Systems Command procures all the Marine Corps aviation equipment). The New Employee Handbook defines the command mission "to serve as the Commandant's principal agent for acquisition and sustainment of systems and equipment used by the Operating Forces to accomplish their warfighting mission" (p. 1). As such, MARCORSYSCOM provides Marines and Sailors with total life cycle system management for a vast array of equipment, ranging from flashlights and ammunition pouches to Expeditionary Fighting Vehicles and M1A1 Abrams Main Battle Tanks. The workforce is comprised of active duty military members, federal civilian employees, and contractor support. Headquartered on Marine Corps Base Quantico in Northern Virginia, the command has portions of its workforce located throughout the United States and is capable of providing the Marine Warfighter system support in all possible deployment locations. Currently, the command has Marines, civilians and contractors forward deployed in both Iraq and Afghanistan providing such system support.

MARCORSYSCOM is organized in four main areas: Command Staff, Professional Staff, Product Groups (PG), and Independent Program Managers (PM). The Command Staff provides the support and special staff required by the Commander, currently Brigadier General Michael M. Brogan. In addition to the commander's personal staff, organizations within the command staff include Corporate Communications, International Programs, Office of Small Business Programs and the Counter-Improvised Explosive Devices Technology Directorate (C-IED).

The command Professional Staff is divided by competency areas, each lead by a deputy or assistant commander. Deputy Commander for Systems Engineering, Interoperability, Architecture & Technology (DC SIAT), is responsible for managing the system level engineering effort for all programs and overseeing engineering activities conducted by the command. Deputy Commander for Resource Management is subdivided into Financial Management and Human Resource Management. Assistant Commander for Contracts oversees all contracting actions within the command to include issuing warrants to the various procurement contracting officers amongst the workforce. Assistant Commander for Life Cycle Logistics (AC LCL) ensures the implementation of Total Life Cycle Systems Management (TLCSM) and Assistant Commander for Programs (AC PROG) provides advice to the commander on program planning and operational issues. Each of these individuals fill the role of Competency Lead for his or her respective area of expertise and provide guidance and direction to the workforce members within his or her competency.

The various Product Groups and Independent Program Managers conduct most of the actual acquisitions for MARCORSYSCOM. There are eight PGs, numbering from 9 to 16.

- PG-9, Operational Forces Systems (OFS) is responsible as the commander's source for TLCSM.
- PG-10, Information Systems and Infrastructure (ISI) provides the Marine Corps with all of its major Corps-wide information technology needs.
- PG-11, MAGTF C2, Weapons and Sensors Development and Integration (MC2I) provides command and control assets for the Marine Air-Ground Task Force as well as radar and air defense assets.
- PG-12, Communications, Intelligence and Networking Systems (CINS) procures systems that facilitate the warfighter's ability to communicate and gather and protect intelligence.
- PG-13, Infantry Weapon Systems (IWS) focuses on purchasing the specific lethal and non-lethal weapon systems required by Marine Infantry units.

- PG-14, Armor and Fire Support Systems (AFSS) manages the Marine Abrams Main Battle Tank and Assault Amphibious Vehicle as well as all fire control and support systems.
- PG-15, Ground Transportation and Engineer Systems (GTES) procures all motor transport vehicles and equipment, power sources and engineering products.
- PG-16, Combat Equipment and Support Systems (CESS) is responsible for all individual combat equipment such as helmets and uniforms, test and maintenance systems and Chemical, Biological, Radiological & Nuclear systems.

PGs are directed by either a Marine Colonel (O-6) or a senior federal civilian. Supporting the Product Group Directors are Strategic Business Teams (SBTs), comprised of experienced civilian members of each of the relevant competency areas. SBT members provide advice and guidance to the director as well as the workforce within the Product Group. These groups are further sub-divided to Program Managers (PMs). PMs are either Marine Lieutenant Colonels (O-5) or equivalent federal civilian. A majority of the command's workforce falls within one of these PMs.

In addition to PMs within Product Groups, the command is also home to several independent PMs. Some of these offices are independent due to their need to be in close proximity to their industry partners and others because the unique nature of their work may not required the vast support and organization available within a Product Group. PM Light Armored Vehicle, PM Global Combat Support Systems, PM Robotic Systems, PM Training Systems, PM Mine Resistant Ambush Protected and PM Ammunition are MARCORSYSCOM's independent Program Managers. Also in this organizational category is the Deputy for the Joint Program Executive Office (JPEO) for Chemical & Biological Defense.

In addition to these four organizations, MARCORSYSCOM Headquarters in Quantico, VA, is also home to the Marine Corps' first Program Executive Office (PEO). PEO Land Systems was formed on February 5, 2007, by direction of Dr. Delores Etter,

Assistant Secretary of the Navy for Research, Development and Acquisition. According to the Marine Corps Logistics Command in an article from the 2009/2010 Edition of the organization's magazine, the PEO is "tasked with providing acquisition oversight for ACAT [Acquisition Category] I and II Marine Corps ground and amphibious weapons systems" (2009, p. 24).

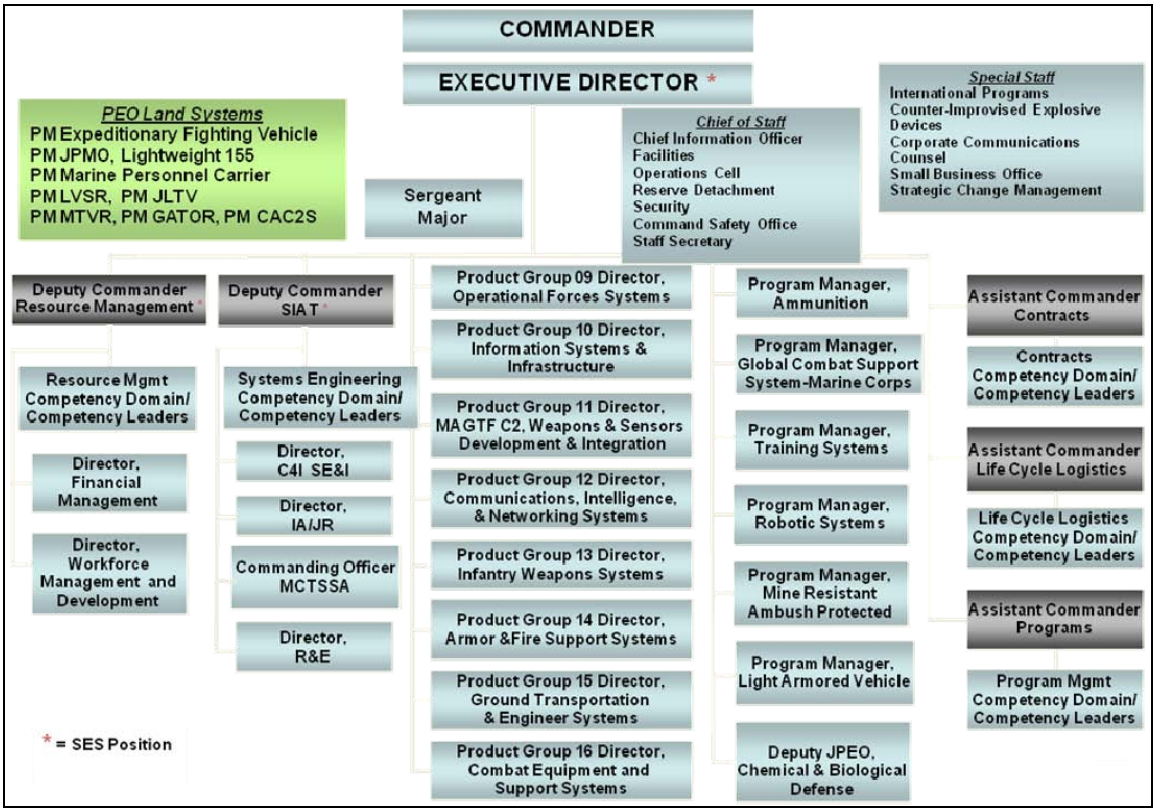

Figure 1. MARCORSYSCOM Organizational Structure (From "Command Overview," 2009, Slide 37)

2. Programs

As the Marine Corps' only agency responsible for the procurement of ground and sea based equipment, Marine Corps Systems Command has witnessed a large growth in the number of programs since the beginning of combat operations in Iraq and Afghanistan. In Fiscal Year 2008 (FY08), the command executed a total of $22.8 billion of appropriated funds, an increase of 335% from just four years previous ("Command Overview," 2009). Defense acquisition programs are all assigned an Acquisition

Category (ACAT) based on the programs financial size, ACAT I programs being the largest and ACAT IV being the smallest. Programs managed by the command fall in all of the Acquisition Categories as well as Abbreviated Acquisition Programs (AAPs), an additional category describing programs that do not meet the ACAT IV minimum size. According to the Command Overview, the distribution of programs amongst the acquisition categories is listed in Figure 2.

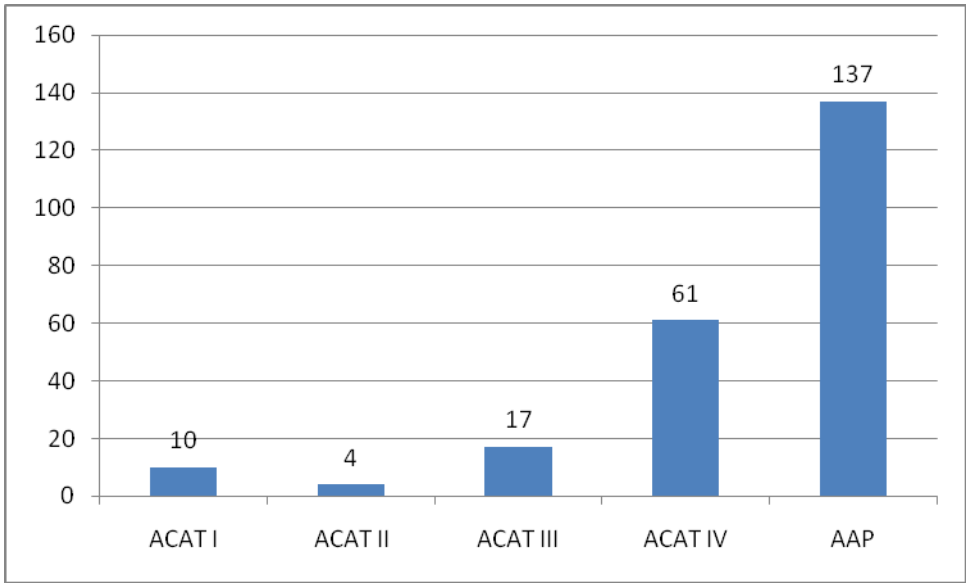

Figure 2. Programs Per Acquisition Category

Most programs procured by the command are commercially available products that either have defense utility as produced or require minimal modifications to make them militarily usable. As such, the most common contracting method to procure this type of program is the Firm Fixed Price contract, which places all the technical and financial risk on the contractor and requires minimal government oversight. In fact, in a March 4, 2009, Presidential Memorandum on government contracting, President Barack Obama announced to Heads of Executive Departments and Agencies that "there shall be a preference for fixed-price type contracts" (The White House, 2009) with the intention of protecting the American taxpayer by reducing the financial risk on the government in federal contracting.

3. Workforce

While the Marine Corps Systems Command increased spending by 335% from FY04 to FY08, "workforce levels over the same period only increased slightly" ("Command Overview," 2009, slide 32). The workforce of Marine Corps Systems Command is comprised of approximately 2,248 employees ("Command Overview," 2009), both military and federal civil servants, located at various stations throughout the country. As of July 3, 2009, the Command Overview PowerPoint identified that 66% of the workforce was civilian employees. At the time of this research, the command utilized the National Security Personnel Systems (NSPS) for civilian personnel management. Within NSPS, the civilian portion of the workforce is divided into two main groups, the Standard Career Group and the Scientific & Engineering Group. Each of these two groups is subdivided into pay bands, which are indicators of seniority within the group. Standard Career Group uses three pay bands (one being most junior, three being most senior) and the Scientific & Engineering Group uses four. The same Command Overview brief indicates that the 55% of the civilian workforce resides within the second pay band of both groups. A majority of these employees are the entry-level analysts and engineers providing program support at the Integrated Product Team (IPT) level acting as Project Officers, Logisticians and Engineers. Employees within the third and fourth pay bands represent either journeymen or expert-level advisors and supervisors. Figure 3 displays the acquisition career path for civilian employees of MARCORSYSCOM.

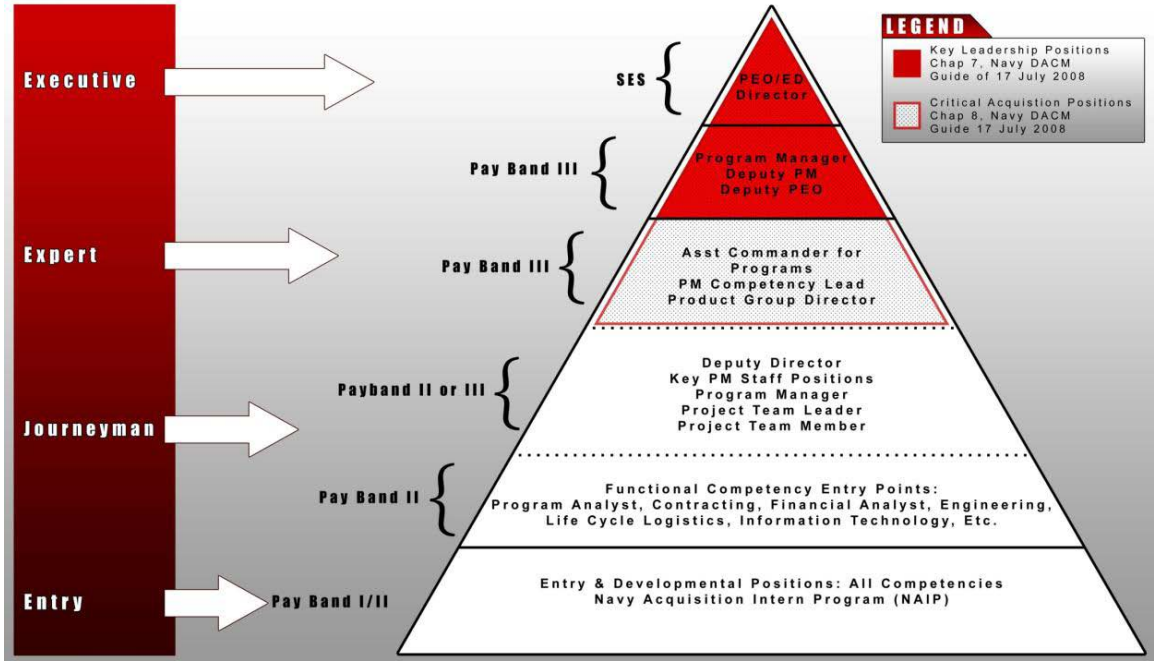

Figure 3. Acquisition Career Path for Civilian Employees (From Bates, 2010, p. 10)

The remaining 34% of the workforce is comprised of military service members, filling all of the same type of positions of their civilian counterparts. The military officers within the command are similarly divided into entry, journeyman and expert levels. With the officer corps of the command making up just 39% of the military workforce, Captains, Lieutenants and Chief Warrant Officers represent the entry-level, making up 18% of this population, while the other 21% is made up of Colonels, Lieutenant Colonels and Majors ("Command Overview," 2009) and primarily represents the journeyman and expert levels. However, according to the command roster taken from its Web portal, The Total Information Gateway Enterprise Resources (TIGER), Majors find themselves filling management positions such as Deputy Program Managers, as well as entry-level positions such as Project Officers and Program Analysts. Figure 4 displays the acquisition career path for Marine Officers and indicates the level (entry, journeyman and expert) for the various ranks and billets.

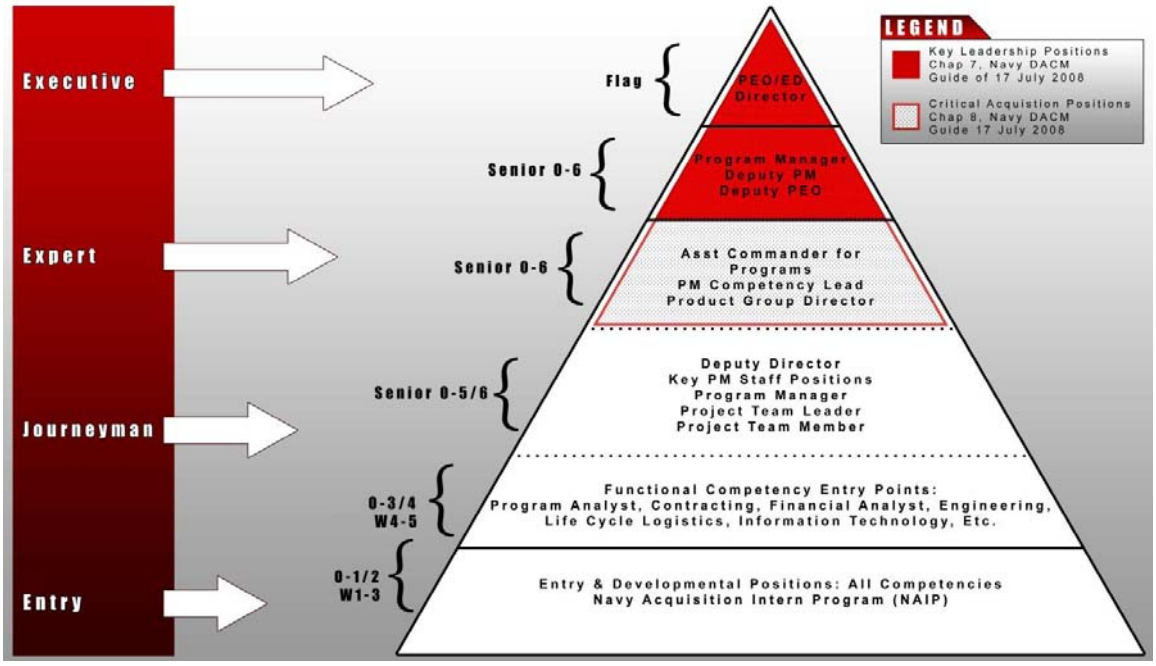

Figure 4. Acquisition Career Path for Marine Officers (From Bates, 2010, p. 10)

4. The Challenge

Despite their pay band, the civilian members of the workforce at Marine Corps Systems Command are selected for interviews and hired based on their knowledge and experience with defense acquisitions. Unlike their civilian co-workers, not all military workforce members are selected for their position due to their knowledge and experience in the defense acquisition community. According to Richard Bates (2010), in the Command's Program Management Career Development Guide, in order to receive the Military Occupational Specialty (MOS) of 8059, Acquisition Management Professional, the service member must have four years of prior acquisition experience. Bates further identifies that even to be an Acquisition Professional Candidate MOS 8057, the most junior Acquisition MOS, the Marine must have two years' prior experience. More often than not, the entry-level military employees have no prior acquisition experience. This poses a unique challenge to the command, as service members typically receive Permanent Change of Station (PCS) orders every three years, resulting in a 1/3 turnover rate annually. Military workforce members are expected to perform the same job as their

civilian counterparts within a short timeframe with no prior exposure to the Defense Acquisition System. While various training opportunities are available for new employees, how is the command to most efficiently maximize its resources to advance the knowledge of new military employees and ensure they are effective members of the workforce during their short 2½ year tour?

B. TRAINING OPPORTUNITIES

Understanding that the Department of Defense acquisition process is a complex system requiring significant understanding of which to be effective, Marine Corps Systems Command instituted various training and learning opportunities for new employees aimed at improving the understanding of the acquisition process and developing a more efficient acquisition professional workforce. These opportunities were also put in place in part because the command wanted to afford the entire acquisition workforce the opportunity to achieve Defense Acquisition Workforce Improvement Act (DAWIA) Level II Certification, even though some were only required to achieve Level I by law.

1. Program Management Certificate (PMC) Course Through Florida Institute of Technology (FIT)

In February 1998, Marine Corps Systems Command formed a relationship with the Florida Institute of Technology (FIT) in order to provide the basic level of education assumed to develop an effective acquisition professional (P. Battaglia, personal communication, February 14, 2010). The eight-week full-time resident instruction was offered at a FIT satellite campus in Alexandria, Virginia. As outlined in the course description provided by Professor Paul Battaglia, PMC program director, students participated in classroom instruction in the following three "sub-courses," completing eight total project management classes:

MGT 5017 – Program Management:

PMC 5010 Project Management Process (PMP)

PMC 5020 Project Schedule & Cost Control (PSCC)

MGT 5101 – Leadership Theory & Effective Management:

PMC 5030 Project Quality Management (PQM)

PMC 5040 Project Leadership & Communications (PLC)

MGT 5070 – Special Topics in Management

PMC 5000 Defense Systems Acquisition Management (DSAM)

PMC 5050 Project Risk Management (PRM)

PMC 5060 Project Contract & Procurement Management (PCPM)

PMC 5090 Systems Engineering & Logistics Management (SELM)

At the students' discretion, they could also earn 9 hours of graduate-level credit, at MARCORSYSCOM's expense, for successful completion of the course. Initially, MARCORSYSCOM required students take an fulfillment exam following completion of the PMC course, which when passed, provided the students equivalency credit for the Defense Acquisition University (DAU) course ACQ (Acquisition) 101, 201, and PMT (Acquisition Program Management) 250. During the course's execution, DAU reviewed the PMC curriculum and accredited the instruction for equivalency of these three courses without requiring students to take the exam.

With relatively minimal changes, MARCORSYSCOM continued using the PMC program until late 2006 when, as a result of growing student dissatisfaction as well as efficiency concerns, the relationship was discontinued. The training would be replaced by a program offered by the Naval Postgraduate School.

2. Advanced Acquisition Program (AAP) Offered Through Naval Postgraduate School (NPS)

Beginning in September 2007, MARCORSYSCOM initiated a program with the Naval Postgraduate School (NPS) in order to continue providing training to new acquisition professionals following the ended relationship with FIT. The newly established program, Advanced Acquisition Program (AAP), was offered to MARCORSYSCOM in three phases, essentially providing the student most educational requirements to achieve DAWIA Level III in Program Management. Phase I consists of a single graduate-level course, MN3331 Principles of Acquisition and Program Management, offered via video teleconference (VTC). In it, students meet twice a week for three hours per session for a 12-week period. Upon successful completion of Phase I, students received equivalency certificates for ACQ 101, ACQ 201, and PMT 250. Phases II and III consist of five full-time onsite courses given over a six-month period followed by one 12-week VTC course meeting two days a week for two hours each session. Completion of Phases II and III provide the student with equivalency for PMT 352. The complete AAP gives the student 19.5 credit hours of graduate-level education, and the material presented represents over one-third of the curriculum for the Master of Science in Program Management offered by the school (Dillard, 2008, 2009). Despite the extensive instructional package proposed by NPS, at the time of this project, MARCORSYSCOM has only chosen to utilize Phase I for the training of new acquisition professionals. The command continues to utilize AAP Phase I as its primary method of training new acquisition professionals.

3. Online Defense Acquisition University (DAU) Courses and Continuous Learning Modules

The Defense Acquisition University (DAU) was formed in 1991 with the intent to provide acquisition professionals throughout the Department of Defense with a means of training in all areas of Acquisition, Technology and Logistics. According to its Web

site,[1] DAU's current mission is to "provide practitioner training, career management, and services to enable the AT&L [Acquisition, Technology & Logistics] community to make smart business decisions and deliver timely and affordable capabilities to the warfighter." DAU accomplishes this through online and resident training organized into various functional areas utilized in Defense Acquisition. Select "core" courses offered by DAU provide the foundation for DAWIA career field certification. In order to achieve the various certifications, acquisition professionals must either complete the required DAU core courses or receive equivalency credit through courses that provide it such as PMC or AAP. In addition to the core courses required to obtain certification, DAWIA also recommends various "Plus" courses and modules for each level aimed at providing the acquisition professional direction when seeking additional professional development within his or her competency.

DAU training is provided in two forms, Courses (both online and resident) and Continuous Learning (CL) Modules (only offered online). Online DAU Courses are self-paced classes requiring anywhere from 20 to 40 hours of work to be completed within a 30- to 60-day period. Each online course consists of multiple modules. Resident DAU Courses are offered at any of the five resident campuses and vary greatly in length. Both online and resident courses provide moderately detailed information over a broad range of topics within a functional area. Continuous Learning Modules are also online self-paced classes but only include one module each. They can typically be completed within a two- to eight-hour period and provide more detailed information about a specific acquisition topic.

4. Command Sponsored Mentorship Program

Marine Corps Systems Command has adopted a structured approach to mentorship. Recognizing that this relationship often happens informally between individuals on a daily basis, the command developed a formal mentorship program in an attempt to maximize the positive outcome of mentor–mentee interaction. Once in the

1. Defense Acquisition University: Mission – Vision Statement, http://www.dau.mil/aboutDAU/Pages/mission.aspx

program, members' relationships and expectations are defined in a contract between the two.[2] They are expected to meet regularly throughout the course of a year and document progress towards mutually agreed upon goals.

2. A template for this contract can be found in Appendix C.

THIS PAGE INTENTIONALLY LEFT BLANK

III. DATA COLLECTION

A. INTRODUCTION

Data were collected for this research from a number of sources, as indicated throughout the chapter. Some data were unable to be collected due to its age and various organizations' record-keeping procedures. Additionally, all financial figures are displayed in then-year dollars (TY$) and are not normalized for inflation, in Chapter III. Cost figures presented are only those that are borne by MARCORSYSCOM. Training costs that are directly allocated to other organizations (i.e., DAU's Web site management and course-hosting costs) are not presented, as they should not factor into MARCORSYSCOM's decision-making process.

B. MARINE CORPS SYSTEMS COMMAND

1. Training and Certification Requirements

In January 2010, Marine Corps Systems Command revised its Program Management Career Development (PMCD) Guide in its fourth edition, outlining the education, training and experience requirements for Acquisition Professionals of all levels within the Program Management Career Field at MARCORSYSCOM. The guide recognizes that the command's workforce includes a "relatively large military component, resulting in frequent turnover" (Bates, 2010, p. 5) and seeks to develop the workforce by "ensuring our workforce meets DAWIA certification requirements and encourages advanced professional development beyond those mandated by DAWIA in order to 'sharpen the axe'" (p. 5). The guide further outlines that there are three developmental areas required for most DAWIA certifications: education, training and experience. Figure 5 describes how DAWIA defines these three developmental areas. According to DAWIA Certification Standards (Defense Acquisition University [DAU], 2008), to receive Program Management Level I, acquisition professionals must have completed the required DAU training courses and modules and have one year of

acquisition experience (which can be fulfilled by 12 months or more of college level academics). There is no formal education requirement for Level I. To receive Level II (DAU, 2010), acquisition professionals must have completed the required DAU training courses and modules and have two years of acquisition experience, at least one of which must be in program management.

Level I (Entry Level)	Level II (Intermediate)	Level III (Advanced)
Education		
❑ Some career fields require a degree. ❑ Some career fields require 24 semester hours in business related disciplines. ❑ Chapter 13 in the DON DAWIA Operating Guide provides guidance on meeting educational requirements.		
Training		
❑ All career fields have mandatory DAU training requirements. ➢ Credit for completing a DAU course can be obtained by: ✓ Completing the DAU course (classroom or web-based distance learning). ✓ Completing a DAU-approved equivalent course. ✓ Fulfilling a DAU course. ✓ DAU course prerequisites must be met. ✓ Register for DAU training using Register-Now at https://www.atrrs.army.mil/channels/cfc/student/logon.asp ❑ Chapter 14 in the DON DAWIA Operating Guide provides guidance on meeting training requirements.		
Experience		
❑ All career fields have mandatory experience requirements. ❑ General acquisition experience includes experience in any acquisition career field. Specialized experience includes experience in specially identified career fields. ❑ Experience can be gained in any position as long as it includes acquisition duties and responsibilities as defined in the Position Category Descriptions (PCDs). PCDs can be found on the DAU website at http://www.dau.mil/doddacm/dod/PCDs.aspx. ❑ Chapter 14 in the DON DAWIA Operating Guide provides guidance on meeting training requirements.		

Figure 5. DAWIA Developmental Areas for Certification (From Bates, 2010, p. 7)

The PMCD Guide also identifies the target certification levels for military and civilian employees of the command. For Lieutenants, Captains and Warrant Officers, the target DAWIA Certification is Level I, and for Majors, the target DAWIA Certification is Level II (Bates, 2010). Level III Certification is required for Lieutenant Colonels and above. Entry-level civilian employees within pay band II are required to achieve DAWIA Level II or III Certification, depending on their position.

2. Additional Development

The Program Management Career Development Guide also identifies unique Advanced Professional Development (APD) Levels that correspond with the DAWIA Certification Levels. Achievement of APD Levels is encouraged but not required. To advance from DAWIA Levels to APD Levels, the employee must complete some level of

additional training as indicated in Figure 6 (Bates, 2010, p. 8). According to Bates (2010), in the PMCD Guide, the two Core Plus Course required for APD Level C are Contracting for the Rest of Us (CLC 011) and Risk Management (CLM 017). The additional requirements for APD Level B are Commercial-off-the-Shelf (COTS) Acquisition for PMs (CLM 025), Improved Statement of Work (CLM 031) and a third course selected from the DAU Level II Core Plus list.

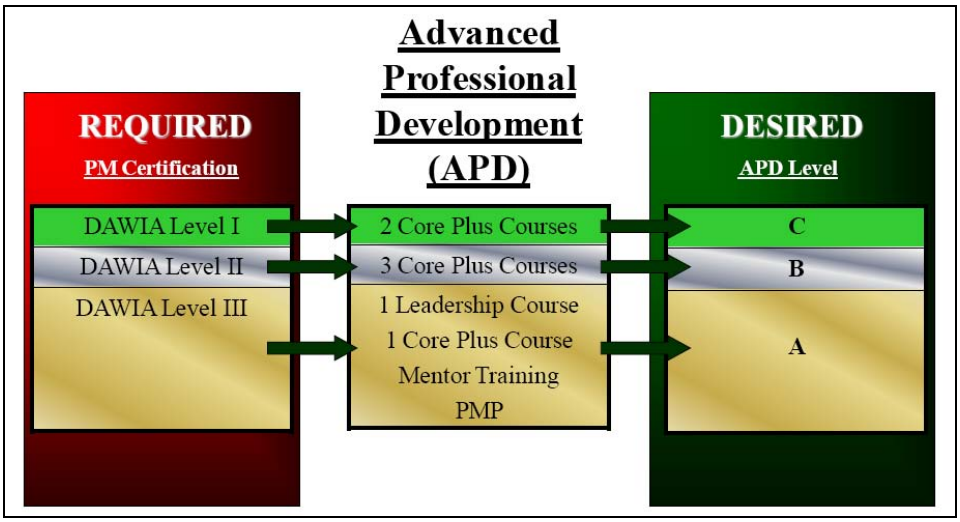

Figure 6. ADP Requirements (From Bates, 2010, p. 8)

In addition to the Advanced Development Program, the Command also encourages and supports employees in pursuit of other forms of developmental activities, to include instructional courses offered by various colleges and universities. Prior to 2000, the command deemed this form of additional development as "off-duty education" and prohibited employees from pursuing them during normal working hours (Feigley, 2000, p. 1). On October 6, 2000, General J. M. Feigley, then director of MARCORSYSCOM, signed Command Policy Letter No. 4-00, which allowed supervisors to authorize employees to utilize a reasonable amount of normal working hours to pursue all forms of developmental activities. This policy letter remains in effect.

3. Military Pay Scales

Military acquisition professionals analyzed in this study range in rank from Chief Warrant Officer – 1 (CWO-1) to Major (O-4). The 2009 basic monthly pay table for

Marine Officers is included as Appendix D. All Marines are provided a Basic Allowance for Subsistence (BAS), and Marine officers who do not reside in military housing are also provided a Basic Allowance for Housing (BAH). Neither BAS nor BAH rates are provided, as both are intended to be utilized by the service member for his or her specific purpose.

C. PROJECT MANAGEMENT CERTIFICATE (PMC) COURSE

MARCORSYSCOM established a relationship with FIT to provide training for its entry-level acquisition professionals, and in February of 1998, the first of 29 PMC courses was delivered at the institution's satellite campus in Alexandria, VA. Previously, the only training offered to employees was through DAU, and only one of the courses required to receive Level II DAWIA Certification in Program Management was offered as a resident course. According to FIT's PMC Program Director, Professor Paul Battaglia, the command believed that by providing students with eight weeks of full time resident instruction, they would achieve the desired level of training in the minimum amount of time (personal communication, February 14, 2010).

1. Schedule and Curriculum

FIT provided MARCORSYSCOM with 29 offerings of PMC before the program ended. Courses were numbered from PMC 01 to PMC 30[3]. The final course began in March 2007, after which, MARCORSYSCOM chose not to participate in any more PMC courses. Students participating in the course met at the FIT campus in Alexandria, VA, for eight hours a day for approximately eight straight weeks. Periods of instruction for each of the eight sub-courses were taught progressively from Monday through Thursday each week, with most Fridays being reserved as a workshop "for study, individual papers, group work, etc" (Battaglia, 2004, slide 9). During typical days of instruction, students participated in two three-hour sessions of academic instruction and the remaining time was available for independent study. After completion of the course, students completed

3. PMC 05 was cancelled before it began.

approximately 61 academic sessions, and if they had previously completed a bachelor's degree and had been accepted to the FIT graduate program, PMC graduates were eligible to receive nine hours of graduate credit.

As described in Chapter II, PMC was delivered through eight classes, arranged into three sub-courses. According to a program description created in 2006 and validated in February 2010, the curriculum was created in order to adequately address nine project management knowledge areas identified by Project Management Institute (PMI) and five Department of Defense (DoD) specific knowledge areas (Battaglia, 2010). PMI publishes *A Guide to Project Management Body of Knowledge (PMBOK Guide) Fourth Edition*, which identifies the nine critical project management knowledge areas as Integration Management, Scope Management, Time Management, Cost Management, Quality Management, Human Resource Management, Communications Management, Risk Management and Procurement Management (Project Management Institute, 2008). While the five DoD specific knowledge areas are not identified by the program description, the individual class descriptions provide detailed insight into what topics are covered.

- PMC 5000 – Defense Systems Acquisition Management provided instruction in the three decision support systems influencing acquisitions, which are the Joint Capabilities Integration Development System (JCIDS), Acquisitions System, and Planning, Programming, Budgeting and Execution (PPBE) System. Additionally, this class taught acquisition strategy, planning and program reviews. PMC 5000 was the only class students received specifically tailored for Defense Acquisitions (Battaglia, 2010).
- PMC 5010 – Project Management Process taught students techniques of team management, negotiation and conflict resolution as well as project planning and work breakdown structures (Battaglia, 2010).

- PMC 5020 – Project Schedule and Cost Control presented the students with techniques in cost estimating and control as well as scheduling. The class also covered control and baseline management of project time, resources and specification (Battaglia, 2010).
- PMC 5030 – Project Quality Management provided the students with an understanding of quality control process and procedures (Battaglia, 2010).
- PMC 5040 – Project Leadership and Communication instructed students in the principles of stakeholder management with a focus on "human relations and interpersonal skills" (Battaglia, 2010).
- PMC 5050 – Project Risk Management taught students how to identify, analyze and mitigate risk as well as recognize opportunities within the project scope (Battaglia, 2010).
- PMC 5060 – Project Contract and Procurement introduced students to various aspects of contracting to include contract planning, formation and administration. In addition, this class described the roles of the various participants in the contracting and procurement function of project management (Battaglia, 2010).
- PMC 5090 – Systems Engineering and Logistics Management outlined the basics of systems engineering management processes, test and evaluation, as well as acquisition logistics considerations (Battaglia, 2010).

All these topics were continuously reinforced and developed through a group project culminating on the last Friday of class when students presented a fictitious "Unmanned Ground Vehicle" (UGV) program. Students were grouped into Integrated Product Teams in order to accomplish this project. In addition to the UGV assignment, students were required to submit a research paper focused on developing written communication skills, identification and creation of problem statements and the conduct of acquisition specific research (Vaughan, Franklin, & Augustin, 2003, p. 8).

Upon successful completion of the PMC Curriculum, students received the opportunity to receive DAU fulfillment credit. In order to receive the fulfillment credit for ACQ 101, ACQ 201 (A&B) and PMT 250, students were required to take and pass the DAU fulfillment exam. In addition to passing the fulfillment exam, current DAWA certification criteria required PMC graduates complete SYS 101, CLB 007 and CLB 016 before meeting the training eligibility for Level I Career Field Certification in Program Management, and CON 110 and IRM 101 or SAM 101 before meeting the training eligibility for Level II Career Field Certification in Program Management.

2. Cost and Enrollment

A few cost factors were associated with the PMC course. FIT established its tuition structure as a per student cost, which decreased as enrollment per offering increased. Additionally, it offered students the opportunity to receive graduate-level credit at a higher fixed rate per course. The cost for each course with and without graduate credit based on its specific enrollment is depicted in Table 1, as provided by Florida Institute of Technology's Alexandria Campus. The other direct cost associated with the PMC course was the transportation provided for participants to use to and from the FIT campus. The only record found during research identifying this cost is from a 28 June 2005 e-mail provided by MARCORSYSCOM Workforce Management and Development office, sent from Diane Howell-Schramm to Evelyn Abrams, both command budget analysts, discussing a rate increase. Rental of two 15-passenger vans for 8 weeks cost the command $1,207.97. The mileage rate for a total of 5,785 estimated miles was $0.15 per mile for a total cost to the command of $867.75.

Class #	Start Date mm/dd/yyyy	Tuition per Student with Graduate Credit (TY$)	Tuition per Student without Graduate Credit (TY$)
PMC01	2/23/1998	$2,700.00	$1,700.00
PMC02	9/28/1998	$2,200.00	$1,160.00
PMC03	9/16/1999	$2,373.00	$1,413.00
PMC04	10/22/1999	$2,373.00	$1,413.00
PMC05*	Canceled	N/A	N/A
PMC06	5/8/2000	$2,676.00	$1,668.00
PMC07	8/14/2000	$2,676.00	$1,668.00
PMC08	10/23/2000	$2,491.00	$1,483.00
PMC09	2/26/2001	$2,588.00	$1,580.00
PMC10	5/7/2001	$2,714.00	$1,706.00
PMC11	8/13/2001	$2,548.00	$1,540.00
PMC12	10/22/2001	$2,548.00	$1,540.00
PMC13	2/23/2002	$2,588.00	$1,540.00
PMC14	3/5/2002	$3,018.00	$2,010.00
PMC15	8/9/2002	$2,588.00	$1,540.00
PMC16	10/23/2002	$2,768.00	$1,720.00
PMC17	2/5/2003	$2,732.00	$1,632.00
PMC18	5/5/2003	$4,734.00	$3,634.00
PMC19	9/5/2003	$2,732.00	$1,632.00
PMC20	11/12/2003	$2,923.00	$1,823.00
PMC21	3/26/2004	$2,822.00	$1,678.00
PMC22	9/10/2004	$2,822.00	$1,678.00
PMC23	11/9/2004	$2,969.00	$1,825.00
PMC24	3/25/2005	$3,200.00	$1,657.00
PMC25	9/9/2005	$2,907.00	$1,729.00
PMC26	10/5/2005	$3,092.00	$1,914.00
PMC27	2/24/2006	$3,105.00	$1,826.00
PMC28	9/8/2006	$2,994.00	$1,781.00
PMC29	11/8/2006	$3,025.00	$2,012.00
PMC30	3/23/2007	$3,991.00	$2,778.00

Table 1. PMC Tuition Cost (From Battaglia, 2010)

Due to the age of the data and FIT's data collection methods, no specific data were found able to identify exactly the Military Officer Breakdown per PMC offering. However, a study conducted by MARCORSYSCOM in 2006 indicated the quantity of total PMC students broken down by rank from 2002 to 2006. Table 2 displays the results of the command study.

Rank	Qty	%
Col	2	0.98%
LtCol	14	6.86%
Maj	43	21.08%
Capt	39	19.12%
1st Lt	3	1.47%
CWO 5	1	0.49%
CWO 4	4	1.96%
CWO 3	9	4.41%
CWO 2	2	0.98%
MGySgt	6	2.94%
MSgt	10	4.90%
GySgt	28	13.73%
SSgt	5	2.45%
Sgt	1	0.49%
Civ	37	18.14%

Table 2. PMC Student Distribution from 2002 to 2006 (From Firth, 2006)

While FIT did not maintain records of the ranks of its students, it did maintain records of the quantity of students who participated in the program and whether or not they chose to accept graduate credit. When asked if the school would provide enrollment history for the PMC course, Professor Battaglia provided the information presented in Table 3.

Class #	Start Date mm/dd/yyyy	Enrolled for Graduate Credit	Enrolled without Graduate Credit	Total Enrolled
PMC01	2/23/1998	5	7	12
PMC02	9/28/1998	14	8	22
PMC03	9/16/1999	15	9	24
PMC04	10/22/1999	19	4	23
PMC05*	Canceled	N/A	N/A	N/A
PMC06	5/8/2000	16	2	18
PMC07	8/14/2000	18	0	18
PMC08	10/23/2000	13	8	21
PMC09	2/26/2001	18	2	20
PMC10	5/7/2001	14	1	15
PMC11	8/13/2001	24	0	24
PMC12	10/22/2001	18	0	18
PMC13	2/23/2002	22	0	22
PMC14	3/5/2002	12	0	12
PMC15	8/9/2002	25	0	25
PMC16	10/23/2002	17	0	17
PMC17	2/5/2003	12	8	20
PMC18	5/5/2003	4	3	7
PMC19	9/5/2003	17	5	22
PMC20	11/12/2003	10	6	16
PMC21	3/26/2004	12	11	23
PMC22	9/10/2004	15	10	25
PMC23	11/9/2004	8	9	17
PMC24	3/25/2005	11	7	18
PMC25	9/9/2005	17	8	25
PMC26	10/5/2005	12	4	16
PMC27	2/24/2006	7	4	11
PMC28	9/8/2006	9	11	20
PMC29	11/8/2006	3	7	10
PMC30	3/23/2007	4	5	9
Total		391	139	530

Table 3. PMC Enrollment Credit Distribution (From Battaglia, 2010)

D. ADVANCED ACQUISITION PROGRAM (AAP)

In 2007, MARCORSYSCOM decided to end the program offered by FIT in favor of the Advanced Acquisition Program (AAP) provided by the Naval Postgraduate School (NPS). Two major factors influenced the change in direction. First, the command believed that the eight to nine full weeks away from work were too demanding and inefficient when a course could be conducted locally through video teleconference (VTC). Secondly, the NPS program held Defense Acquisition University (DAU) equivalency, automatically providing graduates of AAP with ACQ 101, ACQ 201 A & B and PMT 250 completion credit (Sims, "DACM"). In September 2007, 29 participants began the first AAP course offered at Marine Corps Systems Command. Since the first class began, the command has sponsored four additional offerings of AAP, the most recent graduating in December 2009.

1. Schedule and Curriculum

Offered in three phases, MARCORSYSCOM chose to participate only in Phase I of AAP, which consisted of a single graduate-level course offered by NPS. The course, MN3331 Principles of Acquisition and Program Management, was offered by NPS quarterly and lasts approximately 12 weeks. Students successfully completing the course received five-and-a-half graduate level quarter credit hours (Naval Postgraduate School [NPS], 2009). Classes were presented via VTC in two three-hour sessions per week, which take place during working hours. Supervisors of participating students were required to sign an endorsement in which they agreed to allow the student out of work for the designated hours.

According to the 2009 NPS course catalog (pp. 94–95), MN3331 covered topics such as:

> Systems acquisition management, the system acquisition life cycle, requirements analysis, systems engineering, contract management, resource management, test and evaluation, user-producer acquisition management disciplines and activities; and program planning, organizing, staffing, directing and controlling.

The available syllabi further described the course structure and information covered. All courses were structured relatively similarly, with two days of lecture and associated reading, followed by a laboratory exercise each week. Lab exercises were organized to reinforce the material presented during the week. Four syllabi were reviewed for topics covered in each class. Topics that appeared in two or more of the syllabi are listed below.

- Requirements Generation Process (JCIDS)
- DoD Acquisition Framework (DoD 5000 Series)
- Baseline Management
- Project Team Leadership Techniques
- Acquisition Planning & Strategy
- Software Acquisition / Information Technology
- Budget / Financial Management
- Scheduling
- Cost Estimating / Cost Analysis
- Risk Management
- Earned Value Management
- Systems Engineering Process
- Procurement
- Source Selection Planning & Execution
- Test & Evaluation Process
- Lifecycle Logistics
- Milestones & Technical Reviews
- Quality Control

In addition to the weekly course load, students were assigned a project to emphasize the topics presented. In one course, the additional project was an individually developed research paper on a DoD acquisition program (Snider, 2007). Three of the other courses paired students into groups and required them to prepare an acquisition strategy for the acquisition of a fictional weapon system (Boudreau, 2008; Cuskey, 2009; Matthews, 2009). These strategies were then briefed to the class in the form of a milestone review.

According to the school, NPS was the only school that maintains DAU Level III equivalency certification in Program Management (NPS, 2006). Upon completion of the 12 weeks of instruction, students who successfully complete AAP Phase I automatically received completion equivalency from DAU for ACQ 101, 201 (A & B) and PMT 250. Graduates of AAP were still required to complete SYS 101, CLB 007 and CLB 016 before meeting the training eligibility for Level I Career Field Certification in Program Management, and CON 110 and IRM 101 or SAM 101 before meeting the training eligibility for Level II Career Field Certification in Program Management.

2. Cost and Enrollment

NPS offered the Phase I AAP instruction at a set rate for a class of up to 30 students. Two separate NPS proposals described what the cost of the course would cover:

> These funds will be used for labor, equipment, supplies, faculty development, VTC infrastructure maintenance/improvements, awards, conference travel, telephone and other expenditures, as required, to prepare for and accomplish the work proposed and maintain equivalency certification from DAU. (Dillard, 2008, 2009)

Subsequent proposals all included identical language describing what the funding covered. The command paid for all training except for the Summer 2008 course, which was paid for with Defense Agency Director, Acquisition Career Management (DACM) tuition assistance (K. Sims, personal communication, February 17, 2010). As such, the cost figures for the Summer 2008 class were unavailable and were estimated at the rate for the subsequent offering. MARCORSYSCOM Workforce Management Office, which

is responsible for organizing the training, provided the cost to the command for Fall 07, and Spring 09 courses (K. Sims, personal communication, February 17, 2010). The Fall 08 and Fall 09 course costs were gathered from the NPS proposal (Dillard, 2008, 2009). Table 4 displays the dates of and tuition costs charged by NPS for each of the courses offered seating up to 30 students each. All costs are displayed in Then-Year dollars (TY$).

Classes	Fall 07 Sep-Dec	Summer 08 Jul-Sep	Fall 08 Sep-Dec	Spring 09 Apr-Jun	Fall 09 Sep-Dec
Cost TY$	$ 62,410.09	$ 62,410.09	$ 62,410.09	$ 64,001.00	$ 65,000.00

Table 4. AAP Phase I Cost

The AAP course is offered by the command to any acquisition professional requiring entry-level training. Classes are made up of Military (both officer and enlisted) as well as civilians. Table 5 displays the distribution of students in each class of the five AAP classes offered to date. As this research project was focused on Military Officers as first time acquisition professionals, both enlisted service members and civilians were grouped together as others. Successful completion figures were collected from enrollment and graduation rosters provided by MARCORSYSCOM's Workforce Management and Development office (Sims, 2007, 2008a, 2008b, 2009a, 2009b). Attendance displayed represents those students who successfully graduated AAP.

Rank \ Class	**Fall 07**	**Summer 08**	**Fall 08**	**Spring 09**	**Fall 09**	**Average / Class**
Major	4	3	4	2	5	3.6
Capt	4	5	6	4	8	5.4
1st Lt	1	3	2	0	0	1.2
CWO 4	0	2	0	0	2	0.8
CWO 3	2	3	0	0	1	1.2
CWO 2	3	0	0	0	0	0.6
Other	15	10	13	20	14	14.6
Total Participation	**29**	**26**	**25**	**26**	**30**	**27.4**
Officer Participation	**14**	**16**	**12**	**6**	**16**	**12.8**

Table 5. Successful Student Participation in AAP[4]

4. Spring and Fall 2009 numbers were taken from enrollment rosters. Successful completion was validated via e-mail with the command's Workforce Management and Development office (K. Sims, personal communication, 17 February 2010).

E. DEFENSE ACQUISITION UNIVERSITY (DAU) COURSES AND CONTINUOUS LEARNING MODULES

In 1971, the Defense Systems Management College (DSMC) welcomed the school's first students who participated in a 20-week Program Management course. For the next 20 years, DSMC would provide various instructions to the leaders of the defense acquisition workforce (DSCM, 2001). Throughout the 1980s, the defense acquisition organizations faced many challenges, foremost of which was the quality of the acquisition workforce, which the Packard Commission of 1986 described as "undertrained, underpaid, and inexperienced" (U.S. General Accounting Office, 1992, p. 1). The 1989 edition of the Defense Management Review found similar shortcomings in the workforce. As a result of such reports, in November 1990 Congress enacted the Defense Acquisition Workforce Improvement Act (DAWIA), which provided structure and requirements for various education, experience and training requirements for all members of the DoD acquisition workforce. Created in 1991, The Defense Acquisition University (DAU) was founded in order to provide higher quality training to the entire acquisition workforce. All DAWIA career field certifications are based on successful completion of identified DAU courses and continuous learning modules.

1. Schedule and Curriculum

DAU courses are offered either online or through resident instruction at one of the school's campuses. In order to receive DAWIA career field certification, students must complete a series of required courses and continuous learning modules. For DAWIA Level I and Level II certifications in Program Management, acquisition professionals must complete or receive fulfillment for the following DAU Courses and CL Modules ([R] indicates resident course) (DAU, 2008, 2010). The courses and topics covered within are listed below.

a. Level I Core Courses & CL Modules

Fundamentals of Systems Acquisition Management (ACQ 101) is offered as an online course and provides students who have no prior experience a broad

introduction to all phases of the DoD Acquisition System as well as the DoD 5000 series policy documents. It further introduces the other two acquisition decision processes; the Joint Capabilities Integration and Development Systems (JCIDS) and the Planning, Programming, Budgeting and Execution (PPBE) process. Students are given 60 days to complete the course and receive 25 continuous learning points for completion (DAU, ACQ 101).

Fundamentals of Systems Planning, Research, Development, and Engineering (SYS 101) is an online course providing a technically intensive look at the systems engineering and technical management aspects of defense acquisition. Within this course, students learn about the technical and technical management processes as well as work breakdown structures, military standards, design development and the systems engineering plan. Students are given 60 days to complete the course and receive 35 continuous learning points for completion (DAU, SYS 101).

Cost Analysis (CLB 007) is an online continuous learning module providing students with a basic understanding of financial analysis. Students are introduced to financial management terms and basic cost estimating concepts and methodology. CLB 007 takes approximately 3.5 hours and students receive 3.5 continuous-learning points for successful completion (DAU, CLB 007).

Introduction to Earned Value Management (CLB 016) is an online continuous learning module providing the student with an overview of the Earned Value Management (EVM) variables and metrics. Students also learn how cost, schedule and performance measures combine to establish EVM the measurement baseline. CLB 016 takes approximately 1 hour to complete and students receive 1 continuous learning point for successful completion (DAU, CLB 016).

b. Level II Core Courses

Intermediate Systems Acquisition, Part A (ACQ 201A) is an online course providing students with more detailed understanding of the DoD Acquisition System's principles and processes. It also provides instruction on working in Integrated Product

Teams (IPTs). Students are given 60 days to complete the course and receive 37 continuous learning points for completion (DAU, ACQ 201A).

Intermediate Systems Acquisition, Part B (R) (ACQ 201B) is a five-day resident course intended to build upon the topics covered in part A. Students learn how to participate within IPTs and "apply knowledge gained in ACQ 201A to develop plans and resolve problems." After successful completion of the five-day course, students receive 36 continuous learning points (DAU, ACQ 201B).

Program Management Office Course (PMT 250) is an online course intended to follow the successful completion of ACQ 201B. In it, students apply previously learned IPT skills by making decisions as the IPT Lead. Other topics covered include creation of work breakdown structures, program schedules, evaluation of program risk utilizing software tools, cost estimation, contract planning and execution and the application of EVM. Students have 60 days to complete modules 1 through 8 of the course. Modules 9 and 10 are conducted as a four-day facilitated online event in which students participate through DAU's virtual campus. While not required, students are informed that the following Continuous Learning Modules can be used as refresher training before taking PMT 250: Scheduling (CLM 012), Work Breakdown Structure (CLM 013), IPT Management and Leadership (CLM 014), Cost Estimating (CLM 016), Risk Management (CLM 017) and Contracting Overview (CLM 024). Upon successful completion of PMT 250, students receive 80 continuous learning points (DAU, PMT 250). At the time of this research PMT 250 was currently undergoing a curriculum update separating it into two different courses; PMT 251 includes the non-resident instruction and PMT 256 is the facilitated online portion as described above. However, as the course material and duration were relatively the same, further analysis considered PMT 250 equal to the combination of PMT 251 and 256.

Mission Support Planning (CON 110) is an online course intended for the defense contracting workforce. In it, students develop an understanding of contracting decision making aimed at developing "successful mission-support strategies." Participants are familiarized with utilizing the Federal Acquisition Regulation (FAR) and the Defense Federal Acquisition Regulation Supplement (DFARS). They also learn the

basics of market research, developing acquisition strategies and use of the various contract types. Students are given 60 days to complete the course and receive 23 continuous learning points for completion (DAU, CON 110).

Basic Software Acquisition Management (SAM 101) is an online course intended for acquisition workforce not in information technology specific fields. It provides the basic level understanding of unique requirements and issues faced when acquiring or developing software intensive systems. Students are given 60 days to complete the course and receive 35 continuous learning points for completion (DAU, SAM 101).

Basic Information Systems Acquisition (IRM 101) is an online course intended for acquisition workforce members in information technology specific fields. IRM 101 covers the same material described in SAM 101. Students are given 60 days to complete the course and receive 35 continuous learning points for completion. If completed after 15 November 2005, completion of IRM 101 and SAM 101 are interchangeable for the Program Management Career Field Certification. Students only have to complete one or the other in order to receive certification (DAU, IRM 101).

2. Cost

While all courses offered by DAU in the online format are provided at no cost to the student's command, some resident courses may have costs associated with them depending on the location offered. Only two courses listed above fall into this category. ACQ 201B is a resident course and registration for PMT 250 (or PMT 256) is handled as if it were a resident course due to its facilitated modules. When enrolling in these courses, students are given a cost estimator tool, which displays the estimated cost for the course based on its location in relation to the student. Due to MARCORSYSCOM's proximity to DAU headquarters in Fort Belvoir, VA, and its numerous Capital and Northeast Region Campuses available locally, resident courses can be found at no cost to MARCORSYSCOM. On March 7, 2010, an online query was made to DAU into the availability of no cost resident seats in the ACQ 201B course for a MARCORSYSCOM

employee for calendar year 2010. Results showed 386 seats currently available over 22 different course offerings at no cost to the command.[5]

F. MARINE CORPS SYSTEMS COMMAND MENTORSHIP PROGRAM

1. Program Description

While mentorship happens on a daily basis whenever two individuals engage in professional discussion, MARCORSYSCOM formalized the mentorship process by establishing a structured Mentorship Program. According to the 2009-2010 Mentor Guide (p. 3), the command's program is intended to "enhance the:

- Technical skill development of our workforce members.
- Leadership skill development of our workforce members.
- Conservation of corporate knowledge.
- Communication skill of our workforce members.
- Retention of our workforce members."

The Mentor Guide differentiated informal mentorship with this program in three areas. First, the formal program includes a contract in which all parties agree to their expectations of participation. A contract template is included in Appendix C. Second, the program coordinator documents periodic assessments of the mentee–mentor arrangement at six and twelve months as well as conducts an informal follow up assessment six months after completion of the mentorship period. Appendix C includes templates for the mid-term and final assessment as part of the mentee's action plan. Finally, the mentorship arrangement includes participation in specific mentorship training activities throughout the duration of the program ("Mentor Guide").

The 12-month program is facilitated by the Workforce Management and Development office, which falls within the responsibility of the Deputy Commander for Resource Management. The mentorship program is available to all government

5. No courses were currently available for PMT 250, so the same current data could not be collected.

employees of the command, both civilian and military. When participating in the mentorship program, the mentee is expected to develop an action plan with his or her mentor, which outlines his or her objectives, goals and measures of success. Progress towards achieving mentorship success is reviewed in periodic assessments as described above. According to the Mentor Guide, it is left up to the mentee and mentor to determine the specific objectives for technical skill development and in doing so, they are encouraged to utilize the appropriate career development guide for the competency of the mentee.

Mentees are responsible for finding and establishing a relationship with an appropriate mentor. It is recommended that the mentor not be someone to whom the mentee directly reports. A list of mentors is available to all potential participants via a roster query in the commands online Web portal, TIGER. While the mentorship program is available to all government employees, the Mentor Guide (p. 12) indicated that at times there may be a waiting period before someone can participate due to the lack of available mentors.

IV. SURVEY RESULTS

A. INTRODUCTION

In order to collect data to be utilized to determine the specific training need and relative value of various training opportunities, a survey was constructed. The target participants of the survey were current and former active duty acquisition professionals at Marine Corps Systems Command who participated in one or more of the various training opportunities. After NPS Institutional Review Board review and approval, the survey was launched on November 24, 2009, and closed December 31, 2009.

B. SURVEY PARTICIPATION

The researcher utilized the "Zoomerang" online survey tool to create the survey included as Appendix A. A list of 112 potential survey participants was generated from the current roster of acquisition professionals at Marine Corps Systems Command as well as records of attendance from both the Project Management Certificate (PMC) Course and the Advanced Acquisition Program (AAP). No individuals were eliminated from the potential participants list. The 112 potential participants were e-mailed a link to the survey through the Zoomerang Web site, and subsequent reminders were sent on a weekly basis.

Of the 112 potential participants, 50 attempted to complete the survey, five of which were only partially completed. One submission was immediately eliminated, as no answers were provided. Another was eliminated when the participant indicated that his or her first acquisition professional tour lasted less than 12 months. Finally, three submissions were eliminated for failure to meet the commissioned officer requirement. A total of 45 complete and partially completed surveys were included as acceptable for analysis.

C. SURVEY RESULTS

1. Background

Questions posed in the background section were intended to determine that all participants met the desired criteria and to establish a baseline of basic education possessed prior to becoming an acquisition professional at Marine Corps Systems Command.

a. Question 1 Results

Question 1 asked participants their rank when first assigned to MARCORSYSCOM. Figure 7 provides the results.

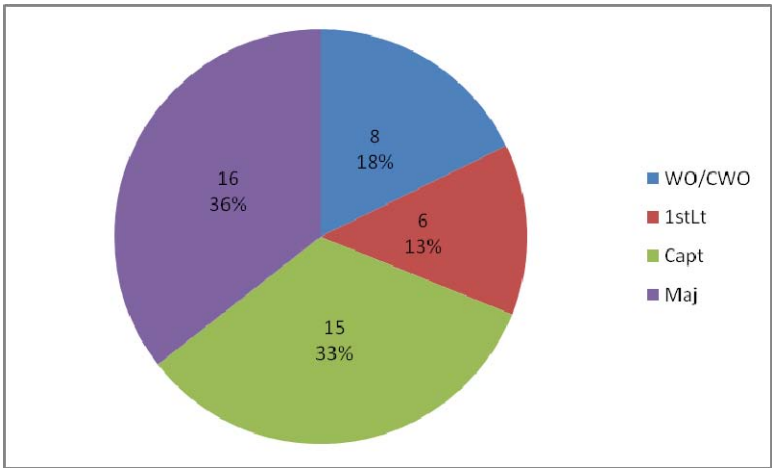

Figure 7. Rank Distribution

b. Question 2 Results

Question 2 asked participants their Military Occupational Specialty (MOS) when first assigned to MARCORSYSCOM. MOS's were grouped by their 2-digit occupational field. Figure 8 provides the results.

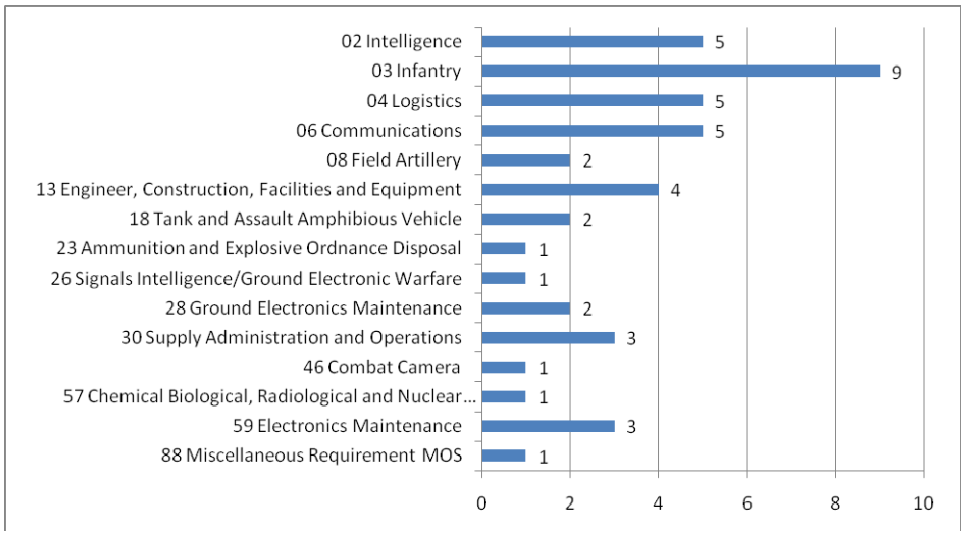

Figure 8. Occupational Field Distribution of Participants

c. Question 3 Results

Question 3 asked participants if they had received a bachelor's degree prior to their first acquisition professional tour. Thirty-four participants (76%) received at least a bachelor's degree, six of whom indicated their degree was in some form of business or management. Eleven participants (24%) had not received at least a bachelor's degree.

d. Question 4 Results

Question 4 asked participants the highest level of education achieved prior to their first acquisition professional tour. Figure 9 provides the results.

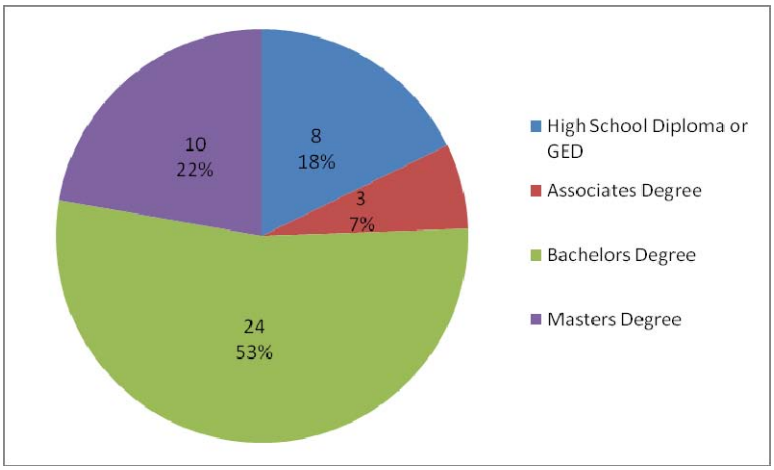

Figure 9. Highest Level of Education Achieved

e. Question 5 Results

Question 5 asked participants if they had been assigned to MARCORSYSCOM as a part of the Special Education Program (SEP) after completing a master's degree from the Naval Postgraduate School (NPS). Five participants (11%) indicated that they were participants in this program. Masters degrees were in Electrical Engineering, Systems Acquisition, Computer Science, Information Technology Management and Operations Research.

f. Question 6 Results

Question 6 asked participants how long their first acquisition professional tour was. As previously indicated, one respondent was eliminated from inclusion due to a lack of experience as the tour was less than 12 months. Five participants did not respond. Figure 10 provides the subsequent results.

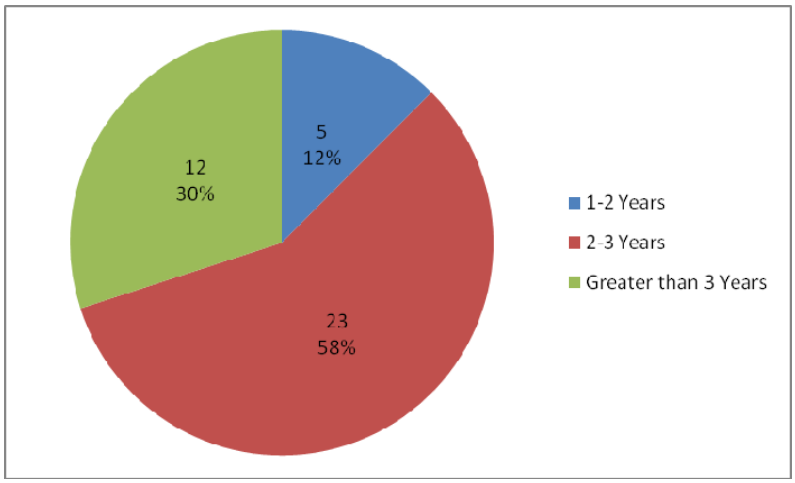

Figure 10. First Acquisition Professional Tour Length

g. Question 7 Results

Question 7 asked participants in what area of the command they worked during their first acquisition professional tour. PEO Land Systems, PG-9, PM GCSS, PM LAV, PM MRAP, PM Robotic Systems, and PM TRASYS were not represented. Figure 11 provides the participant distribution across the command.

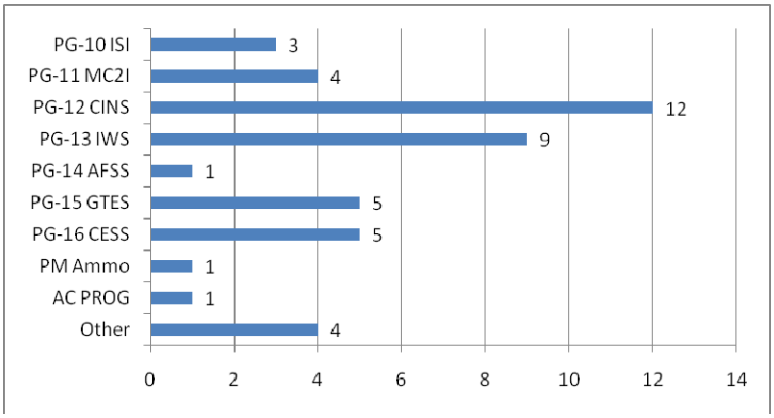

Figure 11. Command Distribution

h. Question 8 Results

Question 8 asked participants if they had any acquisition or program management experience prior to their first tour at MARCORSYSCOM. Only four participants (9%) indicated they had some form of prior Program Management or Acquisition experience.

i. Question 9 Results

Question 9 asked participants what Level Program Management DAWIA Certification they received after their first acquisition professional tour. Seven participants did not provide an answer. Figure 12 provides the results.

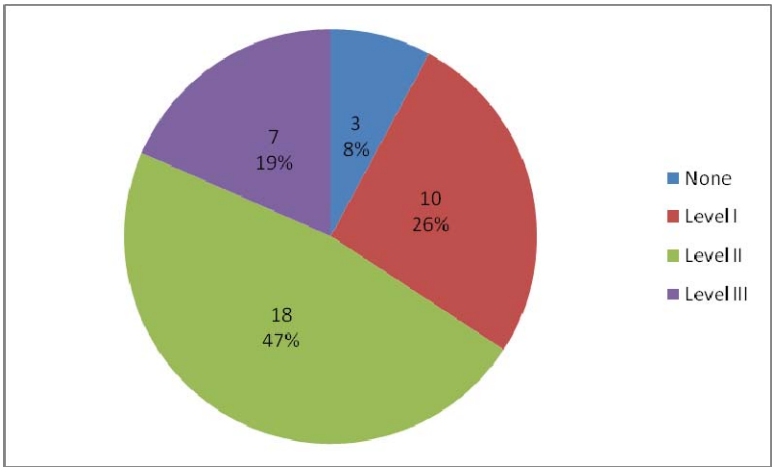

Figure 12. DAWIA Certification Level Distribution

j. Question 10 Results

Question 10 asked participants if they received the secondary MOS 8057, Acquisition Professional Candidate, during their first tour at MARCORSYSCOM. Three participants did not provide an answer. Figure 13 provides the results.

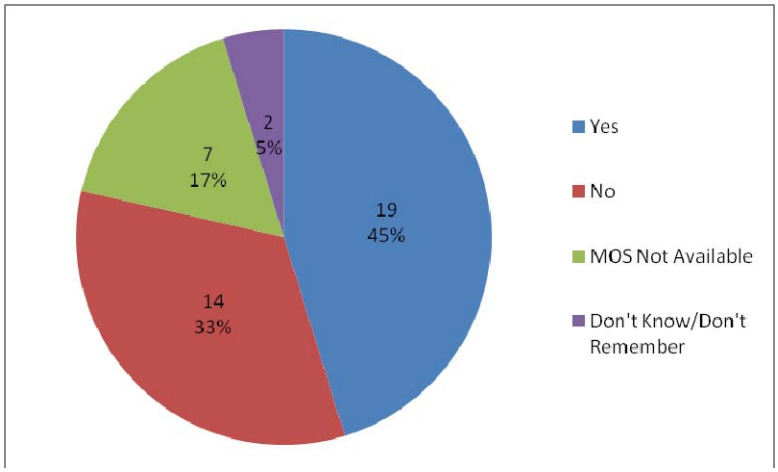

Figure 13. MOS 8057 Acheivement

2. Job Requirements

This section of questions was aimed at establishing a perceived value to a set of job skills necessary to be an effective acquisition professional. The results provided insight into what skills current and prior acquisition professionals identified as necessary to enable their successful job execution.

A list of potentially required job skills was utilized in question 11 of this section as well as questions 15 and 34 of subsequent sections. This list of potential job skills was originally generated based on a review of the courses required to obtain DAWIA Level II Program Management Career Field Certification. After conferring with program academic and management advisors the list was revised to the current state within this survey. The list was not intended to be an all-encompassing list of required job skills, nor did it assume that all listed skills were required for an acquisition professional at MARCORSYSCOM. It was, however, intended to establish an initial baseline of possible job skills with which to compare training opportunities.

a. Question 11 Results

Question 11 asked participants to rate on a scale of one to five, twenty-three job skills necessary for success as an acquisition professional as MARCORSYSCOM. Table 6 indicates the value participants gave to the provided 23 job skills.

Job Skills	Mean	Median	Standard Deviation	Standard Error	Confidence Interval @ 95%
Requirements Generation Process (JCIDS)	3.63	4	1.07	0.17	[3.31 - 3.96]
DoD Acquisition Framework (DoD 5000 Series)	3.81	4	1.11	0.17	[3.47 - 4.15]
Baseline Management (APB)	3.15	3	0.94	0.15	[2.86 - 3.43]
Project Team Leadership Techniques	3.93	4	1.02	0.16	[3.62 - 4.24]
Acquisition Planning & Strategy	3.81	4	1.04	0.16	[3.49 - 4.12]
Software Acquisitions / Information Technology	2.79	3	1.30	0.20	[2.39 - 3.18]
Budget/Financial Management (PPBE, POM Development, Benchmark Management)	4.05	4	0.85	0.13	[3.79 - 4.31]
Scheduling	3.98	4	0.90	0.14	[3.70 - 4.25]
Market Research	3.02	3	1.02	0.16	[2.71 - 3.33]
Cost Estimating / Cost Analysis	3.26	3	1.01	0.16	[2.96 - 3.57]
Risk Management	3.50	4	0.92	0.14	[3.22 - 3.78]
Earned Value Management	2.38	2.5	1.01	0.16	[2.08 - 2.69]
Systems Engineering Process	3.38	3.5	0.99	0.15	[3.08 - 3.68]
Specification Writing (Performance Specification/Purchase Descriptions)	3.50	4	1.21	0.19	[3.13 - 3.87]
Lean Six Sigma Principles	2.05	2	1.06	0.16	[1.73 - 2.37]
Procurement (SOW/SOO, Performance Specifications, Contracting)	4.38	5	0.88	0.14	[4.11 - 4.65]
Source Selection Planning & Execution	3.76	4	1.21	0.19	[3.40 - 4.13]
Test & Evaluation Process	3.85	4	0.88	0.14	[3.58 - 4.12]
Lifecycle Logistics, PBL, Sustainment & Disposal	3.64	4	0.91	0.14	[3.37 - 3.92]
Maintenance & Supply Planning	3.66	4	1.02	0.16	[3.35 - 3.97]
Systems Fielding Process	3.95	4	0.86	0.14	[3.69 - 4.22]
Milestones & Technical Reviews	3.60	4	1.23	0.19	[3.22 - 3.97]
Configuration Control / Quality Control	3.48	4	1.06	0.16	[3.15 - 3.80]

Table 6. Necessary Job Skills

b. Question 12 Results

Question 12 asked participants to identify any skills not included in question 11 they found important to be a successful acquisition professional. Ten responses were provided. Responses are summarized below. Complete responses are included in Appendix B.

- Stakeholder Management (2 Responses)
- Managing Simultaneous Tasks
- Management of Urgently Required Programs
- Contract Deliverable Management/Procurement/Contracting (2 Responses) and Training Material Development
- Best Business Practices
- A Sense of Humor
- Formal School Attendance Prior to Assignment to MARCORSYSCOM (2 Responses)

3. Basic MARCORSYSCOM Educational Opportunities

This section was intended to determine the distribution of training opportunities for the survey population and to establish that MARCORSYSCOM facilitates what was perceived as necessary training.

a. Question 13 Results

Question 13 asked participants if the command provided them with formal training during their first acquisition professional assignment. Twenty-nine participants (69%) answered yes, thirteen (31%) answered no. Three participants did not provide answers.

b. Question 14 Results

Question 14 asked participants if they participated in the Program Management Certificate (PMC) Course offered by Florida Institute of Technology (FIT). Eighteen participants (43%) answered yes. Three participants did not provide answers.

c. Question 15 Results

Question 15 asked participants if they participated in the Advanced Acquisition Program (AAP) Course offered by the Naval Postgraduate School (NPS). Sixteen participants (38%) answered yes. Three participants did not provide answers.

d. Question 16 Results

Question 16 asked only participants who answered "no" to questions 14 and 15, if they were offered different entry-level training other than DAU. Only eight participants responded, with only three indicating that they received another form of training. Of the eight respondents, five provided additional responses. Responses are summarized below.

- I tested out of FIT after attending NPS acquisition course
- MN3331, but after 6 months on station
- DAU
- MN3331 by NPS
- I took the FIT Class but was never given credit

e. Question 17 Results

Question 17 asked participants if they were *only* offered classes via DAU for entry-level training. Seven participants (17%) indicated that the only training they received was via DAU. Three participants did not provide answers.

4. Project Management Certificate Course, Florida Institute of Technology (PMC (FIT)) Specific Questions

This section was intended to establish the relative value participants gave to the education offered through the Project Management Certificate Course provided by the Florida Institute of Technology.

a. Question 18 Results

Question 18 asked participants to indicate when they participated in PMC (FIT). Figure 14 displays the quantity and percentage of participants by year.

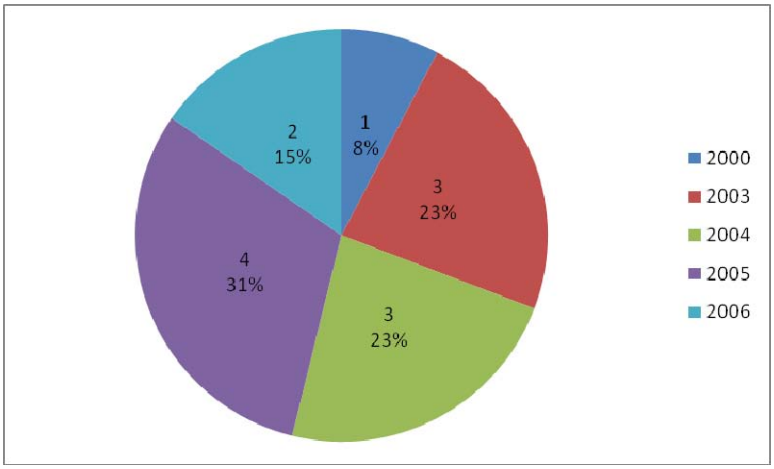

Figure 14. PMC (FIT) Participation Per Year

b. Question 19 Results

Question 19 asked attendees how long they had been at MARCORSYSCOM before attending PMC (FIT). Four attendees did not provide answers. Figure 15 displays the results.

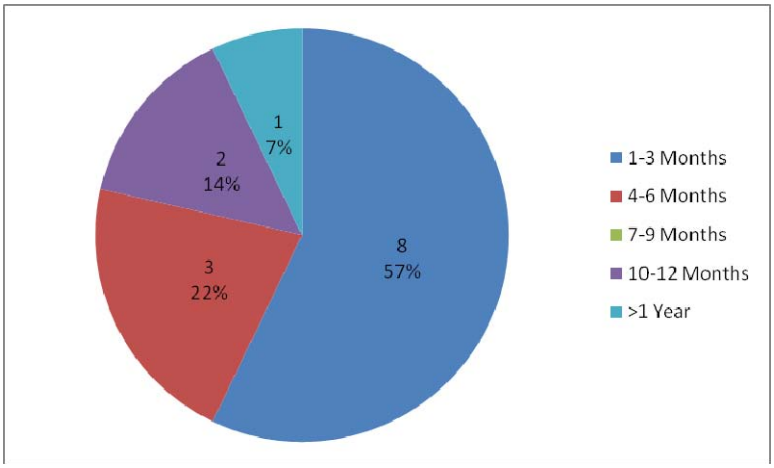

Figure 15. Time Before Attending PMC (FIT)

c. Question 20 Results

Question 20 asked attendees if they had taken any DAU courses prior to attending PMC (FIT). Of the sixteen participants who responded, eight answered yes and eight answered no. Two attendees did not provide answers. Seven participants provided individual responses as indicated below.

- ACQ 101 (6 responses)
- SAM 101 (1 response)

d. Question 21 Results

Question 21 asked PMC (FIT) attendees if they successfully completed the course with a grade of B or higher. Fourteen participants (93%) answered yes and one answered no (7%). Three attendees did not provide answers.

e. Question 22 Results

Question 22 asked PMC (FIT) attendees to rate on a scale of one to five, the quality of the following aspects of the instruction provided. Table 7 indicates the rating participants gave to the provided following aspects of the instruction.

Aspects of Instruction	Mean	Median	Standard Deviation	Standard Error	Confidence Interval @ 95%
Course material	3.27	3	1.39	0.36	[2.56 - 3.97]
Method of presentation (i.e., Live classroom, Video Teleconference, Online, etc)	3.33	4	1.45	0.37	[2.60 - 4.07]
Instructor's presentation of course material	2.73	3	1.44	0.37	[2.01 - 3.46]
Instructor's knowledge of course material	3.20	4	1.47	0.38	[2.45 - 3.95]
Instructor's experience with course material	3.33	4	1.40	0.36	[2.63 - 4.04]
Effectiveness of time spent in each class	3.13	4	1.64	0.42	[2.30 - 3.96]
Efficiency of the overall program organization	3.20	4	1.47	0.38	[2.45 - 3.95]

Table 7. Quality Rating of PMC (FIT) Instruction

f. Question 23 Results

Question 23 asked PMC (FIT) attendees to indicate whether the course length was too long, not long enough or just right. Three attendees did not provide answers. Figure 16 displays the results.

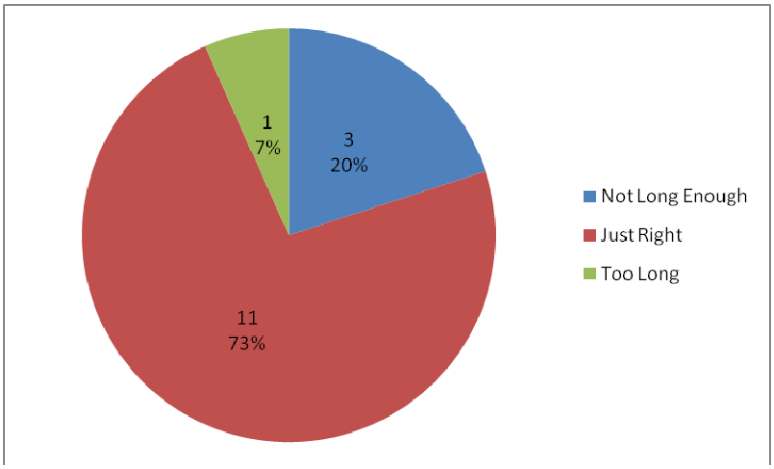

Figure 16. PMC (FIT) Course Length

g. Question 24 Results

Question 24 asked attendees to indicate whether they agree or disagree with statements about the PMC (FIT) course of instruction. Three attendees did not provide answers. Table 8 indicates whether attendees agreed or disagreed with the identified statements.

Statements	Agree	Disagree
PMC (FIT) was an effective and efficient method of training new MARCORSYSCOM Project Officers.	7 47%	8 53%
PMC (FIT) challenged me intellectually.	9 60%	6 40%
PMC (FIT) provided me all or most of the tools I needed to do my job as a Project Officer at MARCORSYSCOM.	4 27%	11 73%

Table 8. PMC (FIT) Statements of Agreement

h. Question 25 Results

Question 25 asked attendees to rate on a scale of one to three, how well PMC (FIT) prepared them for success as an acquisition professional in twenty-three skill areas. Table 9 indicates the rating attendees gave to the identified skills.

Job Skills	Mean	Median	Standard Deviation	Standard Error	Confidence Interval @ 95%
Requirements Generation Process (JCIDS)	1.46	1	0.66	0.18	[1.10 - 1.82]
DoD Acquisition Framework (DoD 5000 Series)	2.07	2	0.92	0.25	[1.59 - 2.55]
Baseline Management (APB)	1.64	1	0.84	0.23	[1.20 - 2.08]
Project Team Leadership Techniques	2.00	2	0.78	0.21	[1.59 - 2.41]
Acquisition Planning & Strategy	1.93	2	0.83	0.22	[1.49 - 2.36]
Software Acquisitions / Information Technology	1.17	1	0.39	0.11	[0.95 - 1.39]
Budget/Financial Management (PPBE, POM Development, Benchmark Management)	1.79	1.5	0.89	0.24	[1.32 - 2.25]
Scheduling	1.93	2	0.83	0.22	[1.49 - 2.36]
Market Research	1.71	2	0.73	0.19	[1.33 - 2.09]
Cost Estimating / Cost Analysis	1.93	2	0.92	0.25	[1.45 - 2.41]
Risk Management	2.21	2	0.80	0.21	[1.79 - 2.63]
Earned Value Management	2.00	2	0.58	0.16	[1.69 - 2.31]
Systems Engineering Process	1.79	2	0.70	0.19	[1.42 - 2.15]
Specification Writing (Performance Specification/Purchase Descriptions)	1.15	1	0.38	0.10	[0.95 - 1.36]
Lean Six Sigma Principles	1.36	1	0.67	0.20	[0.97 - 1.76]
Procurement (SOW/SOO, Performance Specifications, Contracting)	1.54	2	0.52	0.14	[1.26 - 1.82]
Source Selection Planning & Execution	1.62	2	0.65	0.18	[1.26 - 1.97]
Test & Evaluation Process	1.38	1	0.51	0.14	[1.11 - 1.66]
Lifecycle Logistics, PBL, Sustainment & Disposal	1.71	2	0.73	0.19	[1.33 - 2.09]
Maintenance & Supply Planning	1.64	2	0.63	0.17	[1.31 - 1.97]
Systems Fielding Process	1.50	1	0.65	0.17	[1.16 - 1.84]
Milestones & Technical Reviews	1.77	2	0.83	0.23	[1.32 - 2.22]
Configuration Control / Quality Control	1.71	2	0.73	0.19	[1.33 - 2.09]

Table 9. PMC (FIT) Job Skill Ratings

i. Question 26 Results

Question 26 asked attendees to indicate what percentage of the material they received during PMC (FIT) directly contributed to their ability to execute their job as an acquisition professional. Figure 17 displays the results.

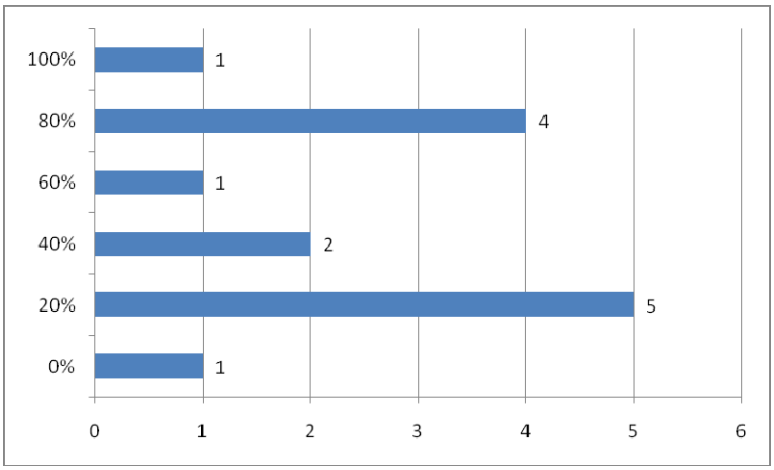

Figure 17. Percentage of Relevant PMC (FIT) Material

5. Advanced Acquisition Program (AAP) Specific Questions

This section was intended to establish the relative value participants gave to the education offered through the Advanced Acquisition Program provided by the Naval Postgraduate School.

a. Question 27 Results

Question 18 asked participants to indicate when they participated in AAP. Figure 18 displays the quantity and percentage of participants by year.

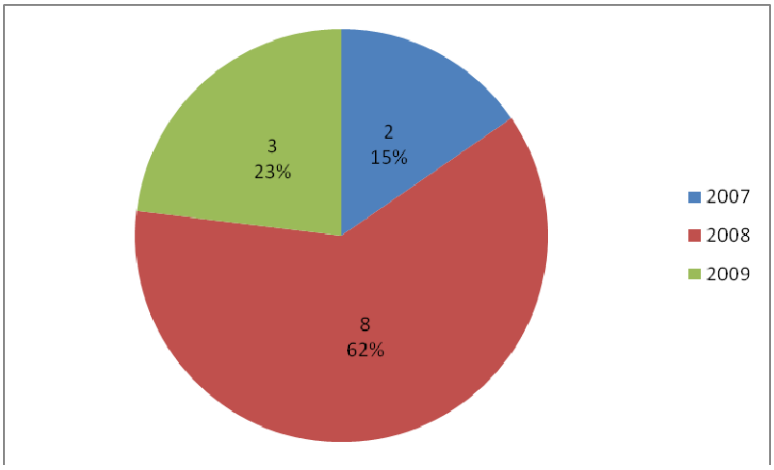

Figure 18. AAP Participation Per Year

b. Question 28 Results

Question 28 asked attendees how long they had been at MARCORSYSCOM before attending AAP. Two attendees did not provide answers. Figure 19 displays the results.

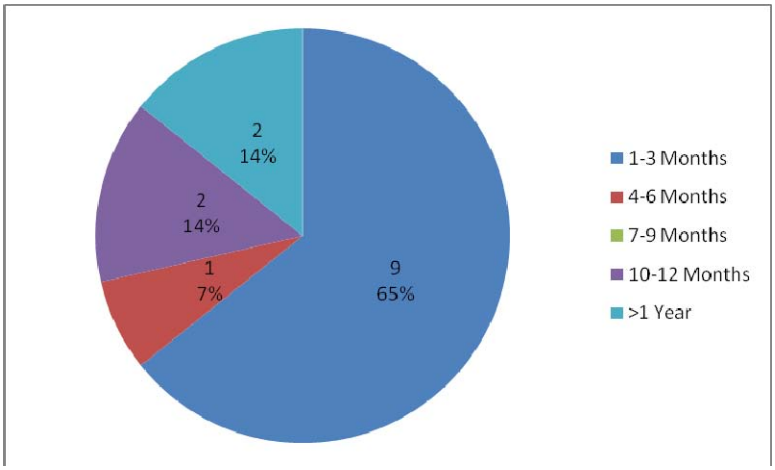

Figure 19. Time Before Attending AAP

c. Question 29 Results

Question 29 asked attendees if they had taken any DAU courses prior to attending AAP. Of the thirteen participants who responded, eight answered yes and five answered no. Three attendees did not provide answers. Eight participants provided individual responses as indicated below.

- ACQ 101 (8 responses)
- ACQ 201 (4 responses)
- SYS 101 (3 responses)
- CON 110 (2 responses)
- SAM 101 (2 responses)
- LOG 101 (1 response)

d. Question 30 Results

Question 30 asked AAP attendees if they successfully completed the course with a grade of B or higher. Twelve participants (92%) answered yes and one answered no (8%). Three attendees did not provide answers.

e. Question 31 Results

Question 31 asked AAP attendees to rate on a scale of one to five, the quality of the following aspects of the instruction provided. Table 10 indicates the rating participants gave to the provided following aspects of the instruction.

Aspects of Instruction	Mean	Median	Standard Deviation	Standard Error	Confidence Interval @ 95%
Course material	3.54	4	1.27	0.35	[2.85 - 4.23]
Method of presentation (i.e., Live classroom, Video Teleconference, Online, etc)	3.31	3	1.18	0.33	[2.67 - 3.95]
Instructor's presentation of course material	3.85	4	1.07	0.3	[3.27 - 4.43]
Instructor's knowledge of course material	4.77	5	0.44	0.12	[4.53 - 5.01]
Instructor's experience with course material	4.69	5	0.48	0.13	[4.43 - 4.95]
Effectiveness of time spent in each class	3.23	3	1.24	0.34	[2.56 - 3.90]
Efficiency of the overall program organization	3.54	4	1.33	0.37	[2.82 - 4.26]

Table 10. Quality Rating of AAP Instruction

f. Question 32 Results

Question 32 asked AAP attendees to indicate whether the course length was too long, not long enough or just right. Four attendees did not provide answers. Figure 20 displays the results.

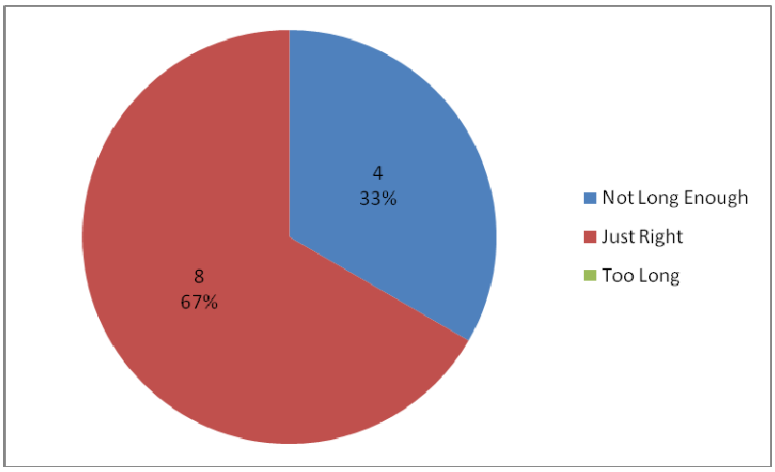

Figure 20. AAP Course Length

g. Question 33 Results

Question 33 asked attendees to indicate whether they agree or disagree with statements about the AAP course of instruction. Three attendees did not provide answers. Table 11 indicates whether attendees agreed or disagreed with the identified statements.

Statements	Agree	Disagree
AAP was an effective and efficient method of training new MARCORSYSCOM Project Officers.	12 92%	1 8%
AAP challenged me intellectually.	11 85%	2 15%
AAP provided me all or most of the tools I needed to do my job as a Project Officer at MARCORSYSCOM.	3 23%	10 77%

Table 11. AAP Statements of Agreement

h. Question 34 Results

Question 34 asked attendees to rate on a scale of one to three, how well AAP prepared them for success as an acquisition professional in twenty-three skill areas. Table 12 indicates the rating attendees gave to the identified skills.

Job Skills	Mean	Median	Standard Deviation	Standard Error	Confidence Interval @ 95%
Requirements Generation Process (JCIDS)	2.08	2	0.64	0.18	[1.73 - 2.43]
DoD Acquisition Framework (DoD 5000 Series)	2.46	2	0.52	0.14	[2.18 - 2.74]
Baseline Management (APB)	1.92	2	0.67	0.19	[1.54 - 2.29]
Project Team Leadership Techniques	1.83	2	0.39	0.11	[1.61 - 2.05]
Acquisition Planning & Strategy	2.33	2	0.49	0.14	[2.05 - 2.61]
Software Acquisitions / Information Technology	1.82	2	0.40	0.12	[1.58 - 2.06]
Budget/Financial Management (PPBE, POM Development, Benchmark Management)	1.92	2	0.51	0.15	[1.63 - 2.21]
Scheduling	2.25	2	0.45	0.13	[1.99 - 2.51]
Market Research	1.50	1.5	0.53	0.17	[1.17 - 1.83]
Cost Estimating / Cost Analysis	2.18	2	0.60	0.18	[1.83 - 2.54]
Risk Management	2.42	2	0.51	0.15	[2.13 - 2.71]
Earned Value Management	2.50	2.5	0.52	0.15	[2.20 - 2.80]
Systems Engineering Process	2.18	2	0.60	0.18	[1.83 - 2.54]
Specification Writing (Performance Specification/Purchase Descriptions)	1.58	1.5	0.67	0.19	[1.21 - 1.96]
Lean Six Sigma Principles	1.22	1	0.44	0.15	[0.93 - 1.51]
Procurement (SOW/SOO, Performance Specifications, Contracting)	2.09	2	0.54	0.16	[1.77 - 2.41]
Source Selection Planning & Execution	1.91	2	0.54	0.16	[1.59 - 2.23]
Test & Evaluation Process	2.09	2	0.30	0.09	[1.91 - 2.27]
Lifecycle Logistics, PBL, Sustainment & Disposal	2.17	2	0.39	0.11	[1.95 - 2.39]
Maintenance & Supply Planning	1.91	2	0.70	0.21	[1.50 - 2.32]
Systems Fielding Process	1.73	2	0.65	0.19	[1.35 - 2.11]
Milestones & Technical Reviews	2.25	2	0.62	0.18	[1.90 - 2.60]
Configuration Control / Quality Control	2.08	2	0.29	0.08	[1.92 - 2.25]

Table 12. AAP Job Skill Ratings

i. Question 35 Results

Question 35 asked attendees to indicate what percentage of the material they received during AAP directly contributed to their ability to execute their job as an acquisition professional. Figure 21 displays the results.

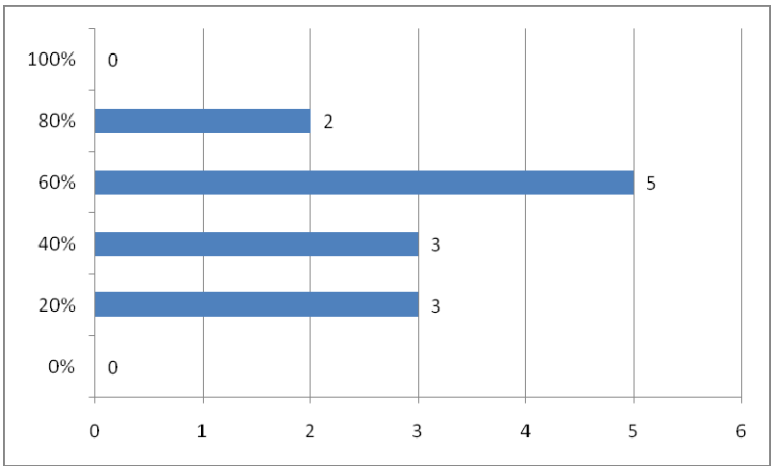

Figure 21. Percentage of Relevant AAP Material

j. Question 36 Results

Question 36 asked attendees if they were able to effectively utilize the skills they learned during AAP on days when class did not meet. Eleven participants (92%) answered yes and one (8%) answered no. Four attendees did not provide answers.

k. Question 37 Results

Question 37 asked attendees who answered yes to the previous question, to indicate the percentage of increased productivity they realized as a result of the material learned. Figure 22 displays the results.

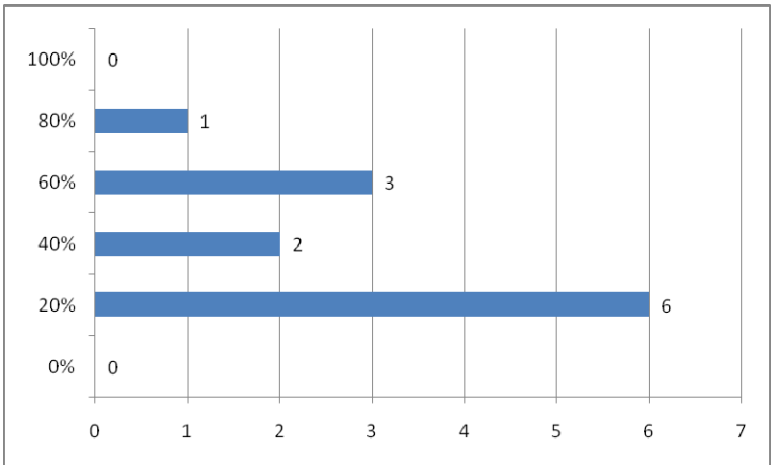

Figure 22. Percentage of Increased Productivity during AAP

6. Defense Acquisition University (DAU) Specific Questions

This section was intended to establish the relative value participants gave to the education offered through both Courses and Continuous Learning Modules provided by the Defense Acquisition University.

a. Question 38 Results

Question 38 asked participants if they completed any DAU Courses while during their first tour as an acquisition professional within the command. Thirty-one participants (86%) answered yes and eight (14%) answered no. Nine participants did not provide an answer. Those who answered yes were then asked to indicate what courses they had taken. A total of sixty-four courses were determined to have been taken. Figure 23 displays the distribution of the courses taken.

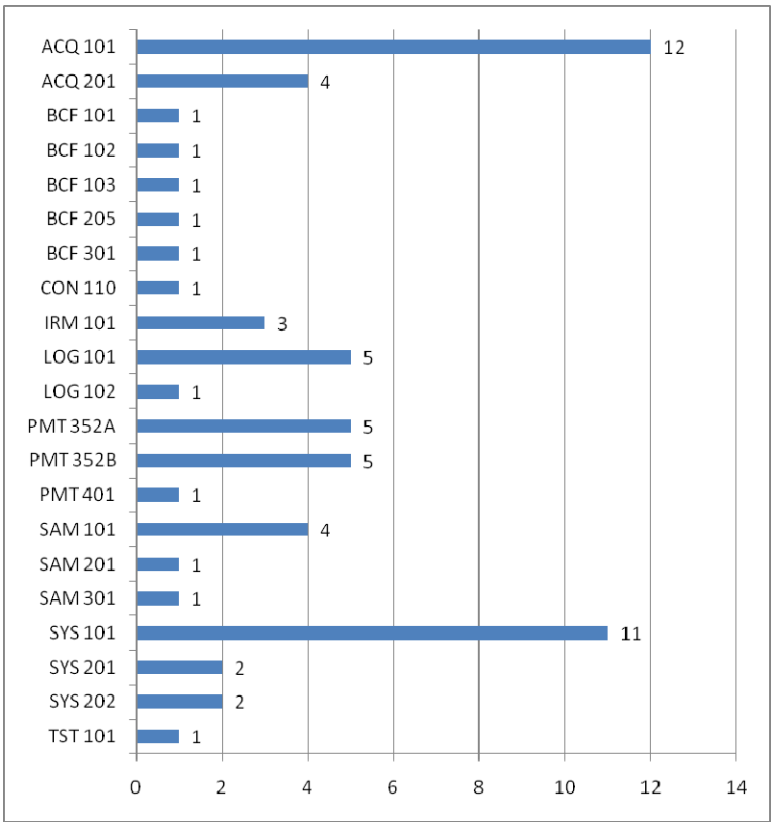

Figure 23. Distribution of DAU Courses Taken

b. Question 39 Results

Question 39 asked participants if they completed any DAU Continuous Learning Modules while during their first tour as an acquisition professional within the command. Twenty-six participants (76%) answered yes and eight (24%) answered no. Eleven participants did not provide an answer. Those who answered yes were then asked to indicate what modules they had taken. A total of 30 modules were determined to have been taken. Figure 24 displays the distribution of the modules taken.

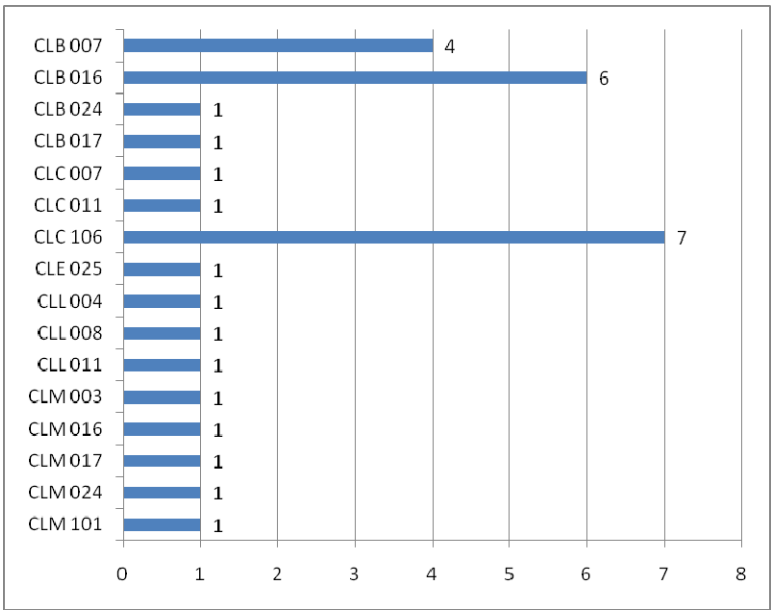

Figure 24. Distribution of DAU Continuous Learning Modules Taken

c. Question 40 Results

Question 40 asked participants to rate on a scale of one to three how pertinent the material in each of the listed DAU categories was to their job as an acquisition professional. Table 13 indicates the rating attendees gave to each category.

Category	Mean	Median	Standard Deviation	Standard Error	Confidence Interval @ 95%
Program Management Specific DAU Courses	2.56	3	0.62	0.11	[2.35 - 2.78]
Non-Program Management DAU Courses	2.35	2	0.57	0.12	[2.11 - 2.58]
DAU Continuous Learning Modules	2.23	2	0.50	0.09	[2.05 - 2.41]

Table 13. Amount of Pertinent Material Presented in DAU Training

d. Question 41 Results

Question 41 asked participants to rate on a scale of one to three how valuable the material in each of the listed DAU categories was to their job as an acquisition professional. Table 14 indicates the rating attendees gave to each category.

Category	Mean	Median	Standard Deviation	Standard Error	Confidence Interval @ 95%
Program Management Specific DAU Courses	2.58	3	0.67	0.12	[2.34 - 2.82]
Non-Program Management DAU Courses	2.27	2	0.55	0.12	[2.04 - 2.50]
DAU Continuous Learning Modules	2.20	2	0.61	0.11	[1.98 - 2.42]

Table 14. Value of Material Presented in DAU Training

7. Additional Education and Training Opportunities

This section was intended to establish the relative value participants gave to any additional education and training opportunities offered through Marine Corps Systems Command such as on-the-job training or the command's mentorship program.

a. Question 42 Results

Question 42 asked participants if the utilized any of the listed programs or events to further their training or certifications. Three of thirty-seven individuals (8%) stated that they participated in Command Mentorship Program. One of thirty-seven individuals (3%) participated in the Executive Leadership Development Program (ELDP). Two of thirty-six individuals (6%) stated that they were active members of the professional group Program Management Institute (PMI). Twenty-two of thirty-seven individuals (59%) participated in command or directorate sponsored training off-sites. Nine of thirty-six (25%) indicated that they pursued some graduate level schooling in a program management field paid for by the command.

b. Question 43 Results

Question 43 asked those who participated in the listed programs or events to rate on a scale of one to three, how valuable the event was in learning the execution of their job as an acquisition professional. Table 15 indicates the rating attendees gave to each program or event.

Program or Event	Mean	Median	Standard Deviation	Standard Error	Confidence Interval @ 95%
Command Mentorship Program	2.00	2	0.00	0.05	[2.00 - 2.00]
Executive Leadership Development Program (ELDP)	2.00	2	0.00	0.03	[2.00 - 2.00]
Active membership in Project Management Institute (PMI)	2.00	2	1.00	0.04	[0.87 - 3.13]
Command or Directorate sponsored training off sites	2.29	2	0.55	0.08	[2.05 - 2.53]
Graduate level schooling in a Program Management related field paid for by MARCORSYSCOM	2.70	3	0.68	0.07	[2.28 - 3.12]

Table 15. Value of Various Training Programs or Events[6]

c. Question 44 Results

Question 44 asked participants if they achieved their 80 Continuous Learning Point requirement for each two-year period they served as an acquisition professional during their first tour. Twenty-seven (73%) answered yes while ten (27%) answered no. Eight participants did not provide an answer.

d. Question 45 Results

Question 45 asked participants to indicate what source of points contributed most to achievement of their Continuous Learning requirement. Figure 25 displays the results. No participants indicated that MARCORSYSCOM Training Off-Sites significantly contributed to their Continuous Learning Achievement.

6. Note that only those having indicated participation in the programs or events should have responded to question 43, thus representing a small sample set of the entire surveyed population.

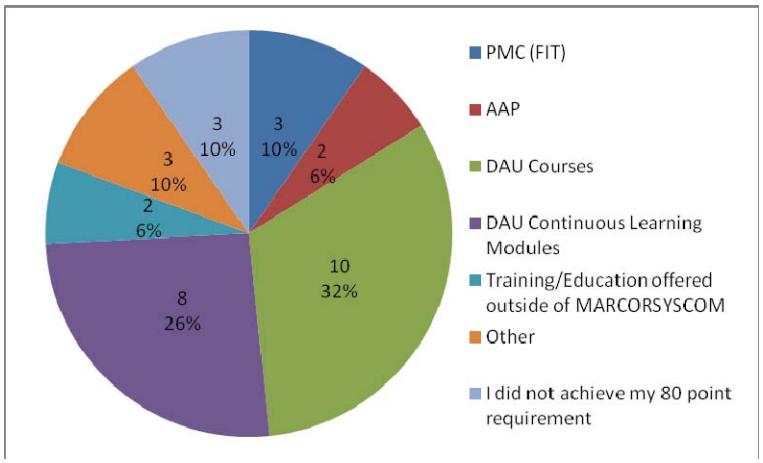

Figure 25. Source Distribution of Continuous Learning Achievement

8. Additional Information

The final section was intended to identify the relative value participants gave to the Defense Acquisition Workforce Improvement Act (DAWIA) career field certification levels, as well as how well Marine Corps Systems Command facilitates training.

a. Question 46 Results

Question 46 asked participants if they believed that achieving DAWIA Level I Certification in the Program Management Career Field provided adequate training to execute the job of an acquisition professional at MARCORSYSCOM. Fifteen participants (47%) answered yes and seventeen (53%) answered no. Thirteen did not provide an answer.

b. Question 47 Results

Question 47 asked participants if they believed that achieving DAWIA Level II Certification in the Program Management Career Field provided adequate training to execute the job of an acquisition professional at MARCORSYSCOM. Twenty-two participants (81%) answered yes and five (19%) answered no. Eighteen did not provide an answer.

c. Question 48 Results

Question 48 asked participants if their supervisor was flexible with their work schedules in order to facilitate command sponsored Program Management training opportunities. Thirty-four participants (94%) answered yes while two (6%) answered no. Nine did not provide an answer.

V. ANALYSIS

A. INTRODUCTION

A cost-benefit analysis was conducted for the various training methods offered to first-time active duty acquisition professionals at MARCORSYSCOM. The objective was first, to identify which method best met the training needs of the employees in the most cost-effective manner and second, to identify gaps remaining in the available training. In order to do so, a baseline of acceptable required training was established. Analysis of the command and DAWIA-required training, as well as survey results, were utilized to make this determination.

1. Methodology

To adequately analyze the various training methods accurately required a baseline of required knowledge. Survey data collected on-the-job skills required and various questions directed at required certification levels were used to identify a set of job skills necessary to be an adequately trained acquisition professional. Subsequently, each of the training methods was then evaluated based on this standard.

To analyze the various training methods, course syllabi and descriptions were utilized to evaluate the course material intended to be provided by each method. The adequacy of intended course instruction material was determined by analysis of the data collected in the survey. Once a training method was analyzed independently, the results were combined with analysis of the instruction given in subsequent DAU courses and modules still required to achieve DAWIA certification. The combined results determined which material was covered adequately and which was lacking in the various training "tracks." Finally, any residual skill areas not adequately provided for were identified.

To conduct an adequate cost comparison of the offered training, all cost figures provided in Chapter III required normalization to a standard year. Calendar year 2009 was chosen, as it is the last year with complete Consumer Price Index (CPI) figures with

which to do analysis. The two annual CPIs that were utilized were obtained from the Bureau of Labor Statistics (BLS) Web site.[7] The first CPI used was the seasonally adjusted index for college tuition and fees. This index was utilized to normalize all fees paid directly to universities. The second was the non-seasonally adjusted all items, all urban consumers index. The second index was utilized for any indirect costs associated with participation in training.

Both BLS CPI figures utilized 1982 as the base year. From each CPI, conversion factors (f_{82}) were generated to normalize each cost figure from its Then Year (TY) amount to 1982 standards. Once every figure was adjusted to 1982, a second factor (f_{09}) was applied to normalize the amount to Calendar Year 2009 (CY09$). Formulas utilized to derive the appropriate factors are listed below.

$$f_{82} = CPI_{82} / CPI_{TY}$$

$$f_{09} = CPI_{09} / CPI_{82}$$

To convert a Then Year figure to CY09$, it was first multiplied by its f_{82} factor. The result was then multiplied by its f_{09} factor to normalize it to CY09$. The CPI and conversion factors for relevant years are listed in Appendix E. All cost figures presented in Chapter V are presented as Calendar Year 2009 figures having been normalized with the above methodology. Figures associated with military pay did not require normalization as CY09$ pay tables were utilized.

2. Assumptions

Certain assumptions were required in order to conduct adequate analysis of the various training methods. Some assumptions were made in order to compensate for areas where data were lacking. Other assumptions were made to conduct an unbiased analysis of the various training methods. Assumptions utilized during analysis of data are listed below.

7.Bureau of Labor Statistics, www.bls.gov/cpi/.

- All subject material identified in course descriptions and/or syllabi were in fact presented.
- Length of service varies greatly and was not able to be accurately collected during the data collection phase of this project. Therefore, lengths-of-service times were notionally applied to each rank for an unbiased analysis. They are as follows: Major (O-4) – 10 years, Captain (O-3) – 4 years, 1st Lieutenant (O-2) – 3 years, Chief Warrant Officer 5 (CWO5) – 20 years, Chief Warrant Officer 4 (CWO4) – 16 years, Chief Warrant Officer 3 (CWO3) – 12 years, Chief Warrant Officer 2 (CWO2) – 10 years. These lengths-of-service times were utilized in determining basic pay. There were no records of 2nd Lieutenants or Warrant Officers (WO1) having participated in any of the training being analyzed.
- All military officers were authorized a Basic Allowance for Subsistence (BAS). The amount received was consistent regardless of rank and therefore, BAS allowances were not considered in the cost analysis.
- All military officers not living in base housing were authorized a Basic Allowance for Housing (BAH). No data were found indicating which officers received BAH, and it was assumed that 100% of BAH received by those not living on base was, in fact, used for housing purposes. Therefore, BAH allowances were not considered in the cost analysis.
- Students who successfully graduated PMC were assumed to have also successfully passed any subsequent fulfillment examination for ACQ 101, ACQ 201 (A & B) and PMT 250.
- No records existed that specifically identified the number of military officers who elected to receive graduate credit from FIT for successful completion of PMC. However, number of graduate credits accepted was available. Therefore, a total average cost per student was determined for

all FIT students regardless of acceptance of graduate credit. The premium paid for graduate credit was equally applied to each student being evaluated.

- For determining opportunity cost, it was assumed that the students' knowledge base after training was representative of their 100% ability to effectively contribute towards productivity. It was also assumed that prior to training a student's knowledge level was at 0%. Therefore, if the percentage of relevant knowledge gained during training was subtracted from 100%, the resultant percentage represented the student's effectiveness prior to attending training.
- Average number of working days per year was 250.71 and the average number of working days per month was 20.89. The work day was considered to be an eight-hour day.
- Due to the time required by each, it was assumed that students enroll in no more than two online DAU Courses at any one time and utilized the entire allowed time to complete. While taking resident DAU Courses, they did not participate in any other online courses. Online Continuous Learning Modules could be completed simultaneous to any other DAU Course.
- To accurately estimate training-track duration, it was assumed that students enroll in their next DAU class immediately following the end of their previous class.
- According to the policy letter granting managers the ability to authorize working hours for professional development, it was assumed that all DAU Courses and CL Modules are completed during working hours.
- At the end of each DAU Course and CL Module, students were required to complete a course satisfaction survey, in which they were asked to identify the percentage of increased knowledge they received as a result of the course or module. This data were requested from DAU, although it was never provided. Therefore, to estimate the opportunity cost associated

with DAU participation, it was assumed that students gained 50% increased knowledge from all DAU courses, which was relatively consistent with the percentages used to determine opportunity cost for PMC and AAP.

The above assumptions were utilized throughout evaluation of all training methods. They were developed with the purpose of ensuring the greatest equality in evaluation.

B. KNOWLEDGE LEVEL REQUIRED

Primary source data for determination of the required job skills were collected by way of an anonymous survey taken by various military officers (primarily Marine Officers) who were current or former acquisition professionals at MARCORSYSCOM. Data were only collected from commissioned officers between the ranks of Warrant Officer and Major. The survey population represented a wide range of military occupational fields with the greatest representation in the Intelligence, Infantry, Logistics and Communications fields. Of the survey participants, 75% achieved at least a bachelor's degree prior to their first tour at MARCORSYSCOM. While during their tours, the population filled positions in all but one of the Product Group Directorates (PG-9 being the exception) and 66% earned at least Level II DAWIA Program Management Career Field Certification. All but five of the participants served at least two years with the command before taking the survey. Based on the vast distribution of participation in both MOS and Product Group as well as the level of education and certification, it was determined that adequate relevant data were collected to conduct thorough analysis and make determinations on the various training areas that were applicable to the entire Marine Corps Systems Command.

1. Job Skills Required

In order to determine the effectiveness of the various training opportunities available to acquisition professionals at MARCORSYSCOM, jobs skills required were identified. Survey questions 11 and 12 were developed in order to assist in developing

the list appropriate required skills. As previously identified, the list of job skills in the survey was not intended to be all encompassing or exclusive of unnecessary job skills. Therefore, in determining which were of actual value to an acquisition professional, an analysis of the survey results was required to select and eliminate jobs skills as necessary.

All skills scored in the survey were ordered by mean score as well as their 95% confidence range to determine which job skills were necessary. It was assumed all skills listed were needed unless statistical evidence was present to show a lack of value. Two skills immediately stood out as not apparently required. Lean Six Sigma Principles and Earned Value Management both showed their entire 95% confidence range below the midpoint score of three. A third, Software Acquisition/Information Technology, was also eliminated as a majority of its confidence range fell below the midpoint score. The selection of these three to eliminate was further solidified after analyzing the rating difference between each skill and the skill ranked next highest. The value of those eliminated decreased by an average of 0.32 while those remaining only decreased by an average of 0.07. Table 16 shows the calculations used to determine the initial set of job skills required as well as the initial job skill prioritization.

Rank	Job Skills	Mean Rating	Difference between next highest	Confidence Interval @ 95%
1	Procurement (SOW/SOO, Performance Specifications, Contracting)	4.38		[4.11 - 4.65]
2	Budget/Financial Management (PPBE, POM Development, Benchmark Management)	4.05	0.33	[3.79 - 4.31]
3	Scheduling	3.98	0.07	[3.70 - 4.25]
4	Systems Fielding Process	3.95	0.03	[3.69 - 4.22]
5	Project Team Leadership Techniques	3.93	0.02	[3.62 - 4.24]
6	Test & Evaluation Process	3.85	0.08	[3.58 - 4.12]
7	Acquisition Planning & Strategy	3.81	0.04	[3.49 - 4.12]
8	DoD Acquisition Framework (DoD 5000 Series)	3.81	0.00	[3.47 - 4.15]
9	Source Selection Planning & Execution	3.76	0.05	[3.40 - 4.13]
10	Maintenance & Supply Planning	3.66	0.10	[3.35 - 3.97]
11	Lifecycle Logistics, PBL, Sustainment & Disposal	3.64	0.02	[3.37 - 3.92]
12	Requirements Generation Process (JCIDS)	3.63	0.01	[3.31 - 3.96]
13	Milestones & Technical Reviews	3.60	0.03	[3.22 - 3.97]
14	Risk Management	3.50	0.10	[3.22 - 3.78]
15	Specification Writing (Performance Specification/Purchase Descriptions)	3.50	0.00	[3.13 - 3.87]
16	Configuration Control / Quality Control	3.48	0.02	[3.15 - 3.80]
17	Systems Engineering Process	3.38	0.10	[3.08 - 3.68]
18	Cost Estimating / Cost Analysis	3.26	0.12	[2.96 - 3.57]
19	Baseline Management (APB)	3.15	0.11	[2.86 - 3.43]
20	Market Research	3.02	0.13	[2.71 - 3.33]
21	Software Acquisitions / Information Technology	2.79	0.23	[2.39 - 3.18]
22	Earned Value Management	2.38	0.41	[2.08 - 2.69]
23	Lean Six Sigma Principles	2.05	0.33	[1.73 - 2.37]

Table 16. Initial Prioritization of Job Skills Required

Before the bottom three skills were completely eliminated, they were examined further to determine why they may not be necessary. Beginning from the bottom, Lean Six Sigma Principles described methods of conducting process improvement and eliminating waste. While MARCORSYSCOM was capable of successfully implementing these principles to improve command wide processes, doing so was out of scope for an entry-level acquisition professional. Additionally, at the project level,

acquisition professionals had minimal control over contractor's process improvement plans. Therefore, this skill remained eliminated from the list of required skills.

Earned Value Management (EVM) was the next lowest rated skill. According to the Department of Defense's EVM Policy Memorandum revised on March 7, 2005, the American National Standards Institute (ANSI) EVM system was required on cost- or incentive-type contracts valued at greater than $20 million, and for those contracts greater than $50 million, an EVM system validated and approved by a competent government contracting officer must be used (Wynne, 2005). In the policy memorandum, Acting Under Secretary of Defense, Michael Wynne went on to say that unless circumstances warrant greater cost control, "EVM is discouraged on firm-fixed price" (2005, p. 2) contracts. Considering that 60% of the programs within MARCORSYSCOM were small enough to meet the AAP criteria (possibly being exempt from using EVM) and most contracts were the firm-fixed price type, it was determined that a majority of the entry-level acquisition professionals within the command were not required to use EVM on a regular basis and it remained eliminated.

Of the eight Product Group Directorates within the command, three (PG-10, PG-11 and PG-12) focused primarily on information systems and software-based products. While the other five did not have software focus, they each had the potential for products that required some form of information technology and/or software. Also, the survey results for this skill had the broadest 95% confidence range, indicating that while it may have scored low, there were a number of individuals who rated it a high importance. This was quite possibly the result of the varying degree of software focus within the command. When the results were further examined, the 19 participants who were assigned to software intensive Product Groups gave this skill an average rank of 3.7, while the remaining participants' average rank was 2.07. Also of note was that 13 of the 14 responses scoring this skill either a four or five were from individuals representing these three Product Groups. This analysis explained the low confidence interval relative to the other skills and as such, Software Acquisitions/Information Technology was not eliminated and remained a required job skill.

Before the list of required job skills was considered complete, responses to question 12 from the survey were analyzed to identify any skills not previously identified as necessary. Ten participants gave answers identifying potential additional skills required for acquisition professionals. Of those, three skills were identified by more than one individual. First, two individuals indicated that formal training prior to assignment to MARCORSYSCOM was necessary to maximize acquisition professional effectiveness. While establishment of this type of training structure may be beneficial, the analysis of doing so was outside of the scope of this research and therefore, was not further investigated. The second skill identified involved contract deliverable management, procurement and contracting. Procurement, including appropriate documentation and contracting, was already included as a necessary skill and was in fact rated highest amongst all skills listed in question 11. These additional comments further emphasized the importance of this job skill to defense acquisition professionals. The third skill identified by more than one individual in response to question 12 was stakeholder management. It could be argued that this skill falls within project team leadership techniques; however, as it was not specifically associated in the survey, it will be added to the list of required job skills for further evaluation.

After analysis of the survey results, it was determined that the following prioritized list outlines the 22 job skills required of entry-level acquisition professionals at MARCORSYSCOM in order to be effective in the execution of their responsibilities.

Rank	Required Job Skills
1	Procurement (SOW/SOO, Performance Specifications, Contracting)
2	Budget/Financial Management (PPBE, POM Development, Benchmark Management)
3	Scheduling
4	Systems Fielding Process
5	Project Team Leadership Techniques
6	Test & Evaluation Process
7	Acquisition Planning & Strategy
8	DoD Acquisition Framework (DoD 5000 Series)
9	Source Selection Planning & Execution
10	Maintenance & Supply Planning
11	Lifecycle Logistics, PBL, Sustainment & Disposal
12	Requirements Generation Process (JCIDS)
13	Milestones & Technical Reviews
14	Risk Management
15	Specification Writing (Performance Specification/Purchase Descriptions)
16	Configuration Control / Quality Control
17	Systems Engineering Process
18	Cost Estimating / Cost Analysis
19	Baseline Management (APB)
20	Market Research
21	Software Acquisitions / Information Technology
22	Stakeholder Management

Table 17. Required Job Skills

2. Certification Requirements

Based on the command's Program Management Career Development Guide, entry-level military acquisition professionals were only required to receive DAWIA Program Management Certification Level I at the ranks of Captain and below and Level II if Majors. Their civilian counterparts filling the same roles were required to achieve DAWIA Level II at a minimum and were more often than not required to achieve Level III. In order to receive Level III certification, an individual was required to have 48 months of experience (of which, 12 can be fulfilled with a bachelor's degree).

Considering this time requirement and understanding the rotation cycle that removes service members from the command as early as 24 months after initial assignment, achieving Level III certification was unreasonable. However, Level II certification was achievable for all entry-level military acquisition professionals within the time constraints they face during their first tour at MARCORSYSCOM.

Furthermore, within the survey, participants were asked to state what DAWIA Level Certification was appropriate for their job as acquisition professionals. Only 47% believed Level I was adequate, while an overwhelming majority of 81% identified Level II as the acceptable amount of training. When asked to discuss Level I training, responses included such comments as "level I is nothing," "the breadth of [responsibilities] for a project officer is well beyond what can be captured in level I training," and "good intro, but not enough detail[ed] information." Not a single comment identified Level I as consisting of adequate training. While there was still hesitation to state that Level II was all that was needed by a first-tour acquisition professional, there were comments indicating that it more adequately represented most of the necessary information. Comments such as "for most project officers…this should be sufficient formal training" and Level II provided "sufficient information and experience to execute ACAT II or higher" programs demonstrated a better acceptance of Level II training as appropriate.

C. COST BENEFIT ANALYSIS BY TRAINING OPPORTUNITY

It is important to note that the evaluation of each training opportunity's effectiveness in addressing job skills was *not* an indication of the effectiveness of the training opportunity itself. Rather, it provided an indication of how much each training opportunity contributed towards the acquisition professional in acquiring of all their required job skills. No training opportunity was intended to provide 100% of an acquisition professional's skills.

1. Project Management Certificate (PMC) Course

MARCORSYSCOM entered into a partnership with the Florida Institute of Technology in 1998 in attempt to advance the learning process for the command's new acquisition professionals. The survey included responses from 16 individuals who participated in the eight-week course between 2000 and 2006. All but one of those individuals took the AAP course within their first year at the command, and only one individual indicated that he or she did not pass the course with a grade of B or higher. Data collected from these survey participants were utilized in the following analysis. A point considered when analyzing the survey data collected about PMC was that unlike for AAP where all students recently participated in the course, survey participants who completed PMC were asked to recall information that was anywhere from three to ten years old.

a. PMC Student Benefit

Initial determination of the skills that were adequately trained was determined by comparing the Required Jobs Skills in Table 17 with the Mean Score found in Table 9, PMC (FIT) Job Skill Ratings. After removing EVM and Lean Six Sigma from consideration, twelve of the twenty-one necessary job skills (excluding Stakeholder Management) were rated above the average rating of 1.70 and were thus considered adequately trained. Of the nine remaining skills, two were in the three least required as per Table 16 and therefore, any coverage of these skills was considered adequate. Specification Writing and Systems Fielding Process were both ranked in the bottom five and were also not included in any course descriptions as covered material. Therefore, both of these skills were considered inadequately trained.

Four of the remaining five skills fell within the top ten required, to include the most required skill of Procurement, which scored a 1.54. Due to its highly desired value and relative low rank as a skill taught through PMC, Procurement was determined to be unacceptably trained. Test & Evaluation Process was ranked sixth-most required skill, yet it was the third to least rated, scoring a 1.38. As such, it was also considered unacceptably trained. The three remaining skills, Source Selection Planning &

Execution, Maintenance & Supply Planning and Requirements Generation Process, were ranked as the ninth, tenth and twelfth most required skills, respectively. Due to their average importance and below-average rating as skills taught during PMC, these three skills were considered to have a below-average training effectiveness.

Table 18 displays a list of how well PMC taught each required job skill. Training effectiveness was determined by analysis of the job skill importance as described above.

PMC Job Skills	Mean Score	Job Skill Training Effectiveness
Risk Management	2.21	Above Average
DoD Acquisition Framework (DoD 5000 Series)	2.07	Above Average
Project Team Leadership Techniques	2.00	Above Average
Acquisition Planning & Strategy	1.93	Above Average
Cost Estimating / Cost Analysis	1.93	Above Average
Scheduling	1.93	Above Average
Budget/Financial Management (PPBE, POM Development, Benchmark Management)	1.79	Above Average
Systems Engineering Process	1.79	Above Average
Milestones & Technical Reviews	1.77	Above Average
Configuration Control / Quality Control	1.71	Above Average
Lifecycle Logistics, PBL, Sustainment & Disposal	1.71	Above Average
Market Research	1.71	Above Average
Baseline Management (APB)	1.64	Acceptable
Maintenance & Supply Planning	1.64	Below Average
Source Selection Planning & Execution	1.62	Below Average
Procurement (SOW/SOO, Performance Specifications, Contracting)	1.54	Unacceptable
Systems Fielding Process	1.50	Unacceptable
Requirements Generation Process (JCIDS)	1.46	Below Average
Test & Evaluation Process	1.38	Unacceptable
Software Acquisitions / Information Technology	1.17	Acceptable
Specification Writing (Performance Specification/Purchase Descriptions)	1.15	Unacceptable

Table 18. PMC Job Skill Training Effectiveness

Students who completed PMC did not immediately qualify for DAWIA Certification. Based on the assumption that graduates of PMC successful passed subsequent fulfillment exams, students received fulfillment credit for ACQ 101, ACQ

201 (A & B) and PMT 250 but would still be required to complete Fundamentals of Systems Planning, Research, Development and Engineering (SYS 101), Cost Analysis (CLB 007) and Introduction to Earned Value Management (CLB 016) to receive DAWIA Level I Certification. While these DAU courses and CL modules emphasized material covered in PMC and perhaps provided more detailed insight, all skills they covered were already addressed at an above-average effectiveness.

Once Level I Certification was achieved, students were exposed to additional material covered in Mission-Support Planning (CON 110) and Basic Software Acquisition Management (SAM 101) or Basic Information Systems Acquisition (IRM 101) in pursuit of DAWIA Level II Certification. While CON 110 provided a student with more in-depth knowledge of the procurement process, it did not provide significant training on planning for and conducting Source Selections. Both SAM 101 and IRM 101 improved the participants' Software Acquisitions/Information Technology skills.

Students required an additional 120 days for completion of the courses required for both Level I and Level II Certification. During these 120 days, 97.5 hours of instruction were completed. The total duration to complete this track (PMC and remaining DAU training) was approximately 180 days or six months. After considering skills taught in additional DAU courses and CL modules required for DAWIA Certification, an acquisition professional in the PMC track had a few residual deficiencies in his or her knowledge area. Assuming a DAU course or CL module improved the job skill area covered by one rating level, the following were residual training gaps:

Below Average:

- Maintenance & Supply Planning
- Source Selection Planning & Execution
- Procurement
- Requirements Generation System

Unacceptable:

- Systems Fielding Process
- Test & Evaluation Process
- Specification Writing

To fully understand the benefit offered by PMC, the above job skill analysis must not be viewed alone, as the quality of instruction also had an impact on the benefit realized by the participant. When asked to score various aspects of the quality of the instruction provided during PMC on a scale of one to five, the highest two scores were given to the method of presentation and instructor's experience. Only the instructor's presentation of the material fell below the score of three, and the average score given to all six areas was 3.17. As such, it was determined that the participants of PMC identified the instruction and instructors associated with the program were of high quality and the students realized an educational benefit as a result.

b. PMC per Student Cost

Two types of costs were analyzed to determine PMC's overall cost per student. The first, or direct cost, included all fees or costs paid by MARCORSYSCOM in order to arrange for and provide the training. The second was opportunity cost paid by the command as a result of the time expected to devote to training. There were a few elements associated with the direct costs. First, PMC had two different tuition rates determined by whether or not a student elected to receive graduate credit. Based on the assumptions, the premium paid for graduate credit was equally distributed amongst all students in this analysis. The second cost element of direct cost was the transportation cost, which includes van rental and mileage rate. As there was only one data point indicating this cost, it was normalized to CY09$ and equally applied to each offering of PMC. By combining the cost for tuition (derived from Table 1 and Table 3 in Chapter III) and transportation, a total course cost was determined. Dividing the total course cost by the number of students per course calculated the per student cost. The weighted average of each course's per-student cost determined the average direct cost per student in CY09$ to be $4012.50. Table 19 displays the costs to determine total direct cost per student.

Class	Total # enrolled	$ Total (CY09$)	Van Rates (CY09$)	Total Direct Course Cost (CY09$)	Cost / Student (CY09$)
PMC01	12	$50,269.16	$2,280.18	$52,549.34	$4,379.11
PMC02	22	$79,322.35	$2,280.18	$81,602.54	$3,709.21
PMC03	24	$91,977.15	$2,280.18	$94,257.33	$3,927.39
PMC04	23	$96,597.71	$2,280.18	$98,877.89	$4,299.04
PMC05	Cancelled				
PMC06	18	$84,377.96	$2,280.18	$86,658.14	$4,814.34
PMC07	18	$88,063.73	$2,280.18	$90,343.91	$5,019.11
PMC08	21	$80,895.12	$2,280.18	$83,175.30	$3,960.73
PMC09	20	$86,528.61	$2,280.18	$88,808.79	$4,440.44
PMC10	15	$69,060.77	$2,280.18	$71,340.95	$4,756.06
PMC11	24	$106,372.58	$2,280.18	$108,652.76	$4,527.20
PMC12	18	$79,779.43	$2,280.18	$82,059.61	$4,558.87
PMC13	22	$92,710.63	$2,280.18	$94,990.81	$4,317.76
PMC14	12	$58,971.62	$2,280.18	$61,251.80	$5,104.32
PMC15	25	$105,352.99	$2,280.18	$107,633.17	$4,305.33
PMC16	17	$76,622.73	$2,280.18	$78,902.90	$4,641.35
PMC17	20	$68,873.46	$2,280.18	$71,153.64	$3,557.68
PMC18	7	$44,830.85	$2,280.18	$47,111.04	$6,730.15
PMC19	22	$82,041.15	$2,280.18	$84,321.33	$3,832.79
PMC20	16	$60,351.42	$2,280.18	$62,631.60	$3,914.48
PMC21	23	$71,799.09	$2,280.18	$74,079.27	$3,220.84
PMC22	25	$81,113.96	$2,280.18	$83,394.13	$3,335.77
PMC23	17	$55,133.06	$2,280.18	$57,413.24	$3,377.25
PMC24	18	$59,757.13	$2,280.18	$62,037.31	$3,446.52
PMC25	25	$80,764.50	$2,280.18	$83,044.69	$3,321.79
PMC26	16	$57,153.55	$2,280.18	$59,433.73	$3,714.61
PMC27	11	$34,751.01	$2,280.18	$37,031.19	$3,366.47
PMC28	20	$55,690.90	$2,280.18	$57,971.08	$2,898.55
PMC29	10	$27,714.41	$2,280.18	$29,994.59	$2,999.46
PMC30	9	$33,621.12	$2,280.18	$35,901.30	$3,989.03
Average Direct Cost / Student (CY09$)					**$4,012.50**

Table 19. PMC Direct Cost per Student[8]

To determine opportunity cost, the amount of time spent attending PMC must be determined. At 40 hours per week for an eight-week course, it was determined that students participated in PMC for 320 hours. From question 26 of the survey, 47.2% of the material presented during PMC was relevant. This indicated that of the 320 hours

8. PMC05 never took place due to cancellation. Reason for cancellation was not determined during this research.

at PMC, students were giving up the opportunity to spend 52.8% of that time effectively executing their job had they not participated in training. This resulted in 168.96 hours of opportunity lost due to participation in PMC. Assuming the additional DAU course hours result in a 50% benefit, an additional 48.75 hours of opportunity were lost for a total of 217.71 opportunity hours lost. Combining the assumptions above with the military pay tables in Appendix D, each officer's pay was calculated at an hourly rate, as displayed in Table 20. The table further multiplies the various hourly pays by the opportunity hours lost to determine each officer's opportunity cost.

All Cost Figures CY09$	Major	Capt	1st Lt	CWO 5	CWO 4	CWO 3	CWO 2
Assumed Years in Service	10	4	3	20	16	12	10
Base Salary	$6,025.20	$4,722.90	$4,012.50	$6,505.50	$5,514.60	$4,164.30	$4,018.80
Hourly Pay	$36.05	$28.26	$24.01	$38.93	$33.00	$24.92	$24.05
Opportunity Hours Lost	217.71	217.71	217.71	217.71	217.71	217.71	217.71
Opportunity Cost	**$7,848.45**	**$6,152.48**	**$5,227.22**	**$8,475.45**	**$7,184.43**	**$5,425.33**	**$5,235.93**

Table 20. PMC Opportunity Cost

By combining the average PMC direct cost with the opportunity cost for each rank and taking the weighted average, a total average PMC cost per student was determined. As no rosters existed including rank for classes prior to 2002, the rank percentages from Table 2 were recalculated including only the Warrant Officer through Major population and were utilized to perform the weighted average. Table 21 displays the overall average PMC cost per student. The overall average PMC cost per student in CY09$ was $10,840.47.

All Figures CY09$	Major	Capt	1st Lt	CWO 5	CWO 4	CWO 3	CWO 2
Average Direct Cost / Std	$4,012.50	$4,012.50	$4,012.50	$4,012.50	$4,012.50	$4,012.50	$4,012.50
Opportunity Cost	$7,848.45	$6,152.48	$5,227.22	$8,475.45	$7,184.43	$5,425.33	$5,235.93
Total PMC Cost	$11,860.95	$10,164.98	$9,239.72	$12,487.95	$11,196.93	$9,437.83	$9,248.43
% Participation	42.57%	38.61%	2.97%	0.99%	3.96%	8.91%	1.98%
Average PMC Cost per Student							**$10,840.47**

Table 21. Total PMC Cost per Student

2. Advanced Acquisition Program (AAP)

Beginning in 2007 and continuing through the conduct of this research, MARCORSYSCOM relied on the Naval Postgraduate School to provide entry-level training to the acquisition professionals through the Advanced Acquisition Program. The survey included responses from 18 individuals who participated in the 12-week course. All but two of those individuals took the AAP course within their first year at the command, and only one individual indicated that he or she did not pass the course with a grade of B or higher. Data collected from these survey participants were utilized in the following analysis.

a. AAP Student Benefit

Initial analysis comparing the Required Job Skills listed in Table 17 to Mean Score displayed in the AAP Job Skill Training Effectiveness from Table 22 allowed for an initial determination of what skills are adequately trained during AAP. Participants of the survey were asked to rank how well AAP taught each of the listed skills. Twelve of the twenty-one necessary job skills (excluding Stakeholder Management) were rated higher than the average score of 2.03 and were considered to have been presented adequately. The remaining nine skills included the three least important as per Table 17, and as such, any coverage of these skills was considered adequate. All but Market Research were identified as being taught according to the four AAP syllabi reviewed. Therefore, this skill, while not highly prioritized, was not taught adequately by AAP.

Of note with the remaining six job skills, five were ranked as being in the top ten most necessary skills. Budgeting/Financial Management, the second most important skill, scored a 1.92, Source Selection Planning & Execution scored a 1.91 and Project Team Leadership scored a 1.83. These three skills were considered taught, but poorly, when compared to their relative importance. The fourth and fifth most important skills fell even further from the average. Maintenance & Supply Planning, with a score of 1.91 and Systems Fielding Process with a score of 1.73, were the last of the top ten ranked skills which fell below the average. Along with Specification Writing, these three

skills were also not mentioned in the course syllabi. Lack of instruction combined with their low scores led to these final three skills being considered unacceptable.

Table 22 displays a list of how well AAP taught each required job skill. Training effectiveness was determined by analysis of the job skill importance as described above.

AAP Job Skills	Mean Score	Job Skill Training Effectiveness
DoD Acquisition Framework (DoD 5000 Series)	2.46	Above Average
Risk Management	2.42	Above Average
Acquisition Planning & Strategy	2.33	Above Average
Milestones & Technical Reviews	2.25	Above Average
Scheduling	2.25	Above Average
Cost Estimating / Cost Analysis	2.18	Above Average
Systems Engineering Process	2.18	Above Average
Lifecycle Logistics, PBL, Sustainment & Disposal	2.17	Above Average
Procurement (SOW/SOO, Performance Specifications, Contracting)	2.09	Above Average
Test & Evaluation Process	2.09	Above Average
Configuration Control / Quality Control	2.08	Above Average
Requirements Generation Process (JCIDS)	2.08	Above Average
Baseline Management (APB)	1.92	Acceptable
Budget/Financial Management (PPBE, POM Development, Benchmark Management)	1.92	Below Average
Maintenance & Supply Planning	1.91	Unacceptable
Source Selection Planning & Execution	1.91	Below Average
Project Team Leadership Techniques	1.83	Below Average
Software Acquisitions / Information Technology	1.82	Acceptable
Systems Fielding Process	1.73	Unacceptable
Specification Writing (Performance Specification/Purchase Descriptions)	1.58	Unacceptable
Market Research	1.50	Unacceptable

Table 22. AAP Job Skill Training Effectiveness

Having identified the skills taught at a below average level was not adequate for a complete analysis of AAP, as it contributed to an acquisition professional's development. A Marine Officer who participated in AAP received DAU certification for ACQ 101, ACQ 201A & B and PMT 250. In order to achieve DAWIA Level I Certification, graduates must still complete Fundamentals of Systems Planning,

Research, Development and Engineering (SYS 101), Cost Analysis (CLB 007) and Introduction to Earned Value Management (CLB 016). These courses may serve to augment some of the deficiencies in AAP alone. Taking Cost Analysis, CLB 007, enabled students to enhance and reinforce the Business/Financial Management skill area and compensate for the below average coverage of the topic during AAP. SYS 101 reinforced the already strong Systems Engineering Process skill area while CLB 016 provided students more education in an area identified to have no significant value for the first tour acquisition professional.

When progressing to Level II, students were further exposed to material covered in Mission-Support Planning (CON 110) and Basic Software Acquisition Management (SAM 101) or Basic Information Systems Acquisition (IRM 101). In CON 110, participants develop their contracting skills such as FAR and DFARS usage as well as development of acquisition strategies. However, the major benefit to taking CON 110 lied in the period of instruction on Market Research, a skill inadequately taught by AAP. Unfortunately, CON 110 did not provide significant training on planning for and conducting Source Selections. Both SAM 101 and IRM 101 also improved the participants Software Acquisitions/Information Technology skills.

Students required an additional 120 days for completion of the additional courses required for both Level I and Level II Certification. During these 120 days, 97.5 hours of instruction were completed. The total duration to complete the AAP track was approximately 210 days, or seven months. Once augmented by the still required DAU courses and CL modules, an acquisition professional that completed the AAP course had a few residual deficiencies in their knowledge area. Assuming a DAU course or CL module improved the job skill area covered by one level, the following training gaps remained:

Below Average:

- Source Selection Planning & Execution
- Project Team Leadership Techniques
- Market Research

Unacceptable:

- Maintenance & Supply Planning
- Systems Fielding Process
- Specification Writing

In addition to the specific skills presented in this training track, there were other benefits realized by the AAP student. AAP's two-day-a-week delivery method allowed students the opportunity to apply the skills they were learning at work while still participating in class. Ninety-two percent of students polled indicated that they were able to effectively apply the material learned while still taking the class and realized a 20% to 40% increase in productivity as a result. When asked about the quality of the instruction, students rated AAP extremely high without a single aspect being rated below a three on a scale of one to five. Of note in the scored responses were the instructors themselves. The three aspects of instruction focused specifically on the instructor were the highest three rated, averaging a score of over 4.4. As such, it was determined that AAP provided students with high quality instruction and instructors.

b. AAP per Student Cost

The same two types of costs (direct and opportunity) used to determine the PMC per student cost were utilized for AAP. Determining direct cost was relatively simple. The cost of each course was first normalized to calendar year 2009 in the method previously described and then divided by the number of students who successfully completed the course. Table 23 displays the direct cost per student to attend AAP in normalized calendar year 2009 dollars (CY09$). By taking a weighted average of the normalized direct cost per course, it was determined that AAP direct cost in CY09$ per student was $2,337.89.

AAP Classes	Fall 07	Summer 08	Fall 08	Spring 09	Fall 09
Cost (TY$)	$62,410.09	$62,410.09	$62,410.09	$64,001.00	$65,000.00
CPI Adjusted (CY09$)	$64,575.83	$62,188.10	$62,188.10	$64,001.00	$65,000.00
Graduating Students	29	26	25	26	30
Direct Cost / Sdt (CY09$)	$2,226.75	$2,391.85	$2,487.52	$2,461.58	$2,166.67
Average Direct Cost / Student (CY09$)					**$2,337.89**

Table 23. AAP Direct Cost per Student

Determining opportunity cost per student was not nearly as simple. Knowing that the course required six hours of time per week and course length of 12 weeks, it was determined that a student was unable to conduct his or her normal work responsibilities for a total of 72 hours during AAP. From question 35 in the survey, it was determined that the amount of relevant material presented during AAP was roughly 49.2%. Therefore, of the 72 hours spent at AAP, students were giving up the opportunity to spend 50.8% of that time, or 36.576 hours, towards effectively executing their job without training. Assuming the additional DAU course hours resulted in a 50% benefit, an additional 48.75 hours of opportunity were lost for a total of 85.326 opportunity hours lost. Using the 2009 military pay tables in Appendix D and the assumptions, the average hourly pay of an office was calculated. Multiplying the hourly pay by the number of hours effectively executing their job represented the opportunity cost paid by the command. Table 24 displays the opportunity cost realized by the command per rank.

All Cost Figures CY09$	Major	Capt	1st Lt	CWO 4	CWO 3	CWO 2
Assumed Years in Service	10	4	3	16	12	10
Base Salary	$6,025.20	$4,722.90	$4,012.50	$5,514.60	$4,164.30	$4,018.80
Hourly Pay	$36.05	$28.26	$24.01	$33.00	$24.92	$24.05
Opportunity Hours Lost	85.326	85.326	85.326	85.326	85.326	85.326
Opportunity Cost	**$3,076.00**	**$2,411.31**	**$2,048.68**	**$2,815.76**	**$2,126.32**	**$2,052.09**

Table 24. AAP Opportunity Cost

The total AAP program cost was calculated by taking a weighted average of the combined opportunity and average direct cost per student. Table 25 displays the overall cost of AAP by rank. The average overall cost per military student for participation in AAP was $4,883.87.

All Figures CY09$	Major	Capt	1st Lt	CWO 4	CWO 3	CWO 2
Average Direct Cost / Std	$2,337.89	$2,337.89	$2,337.89	$2,337.89	$2,337.89	$2,337.89
Opportunity Cost	$3,076.00	$2,411.31	$2,048.68	$2,815.76	$2,126.32	$2,052.09
Total AAP Cost	$5,413.89	$4,749.20	$4,386.57	$5,153.65	$4,464.21	$4,389.98
Number of Participants (%)	18 (28.13%)	27 (42.19%)	6 (9.38%)	4 (6.25%)	6 (9.38%)	3 (4.69%)
Average AAP Cost per Student						**$4,883.87**

Table 25. Total AAP Cost per Student

3. Defense Acquisition University (DAU)

Analysis of DAU courses and modules when combined with either PMC or AAP was conducted above. In order to analyze the training offered by DAU as a stand-alone training method, a list of DAU courses that best fulfills the Job Skills required as identified in Table 17 were evaluated.

a. DAU Student Benefit

In the survey, participants were asked two questions regarding the quality of the DAU training they received. Questions 40 and 41 established clearly that the most pertinent and valuable DAU training came from Program Management specific courses, which scored significantly higher than the two other choices. Program Management specific courses were considered to be those required for DAWIA Program Management Certification. Non-Program Management specific courses and CL Modules ranked second and third respectively, both scoring significantly over 2.0 on a scale of one to three. As indicated by the responses, it was evident students found the quality and value of DAU training acceptable.

As they ranked highest amongst the three categories offered, Program Management specific courses were analyzed first to determine the job skills they taught. By reviewing the course concept cards for each of the courses required for Level I and

Level II it was determined that the list of skills displayed in Table 26 and Table 27 were taught. While there was no means of measuring the quality or adequacy of the instruction of these skills, it was assumed that any addressing of the material represented adequate instruction.

DAWIA Level I PM Certification Requirements	
Course	**Skills**
ACQ 101	DoD Acquisition Framework
	Requirements Generation Process
	Budget/Financial Management
	Milestones (NOT Technical Reviews)
SYS 101	Systems Engineering Process
	Configuration Control / Quality Control
CLB 007	Cost Estimating / Cost Analysis
CLB 016	Earned Value Management

Table 26. Skills Taught in DAWIA Level I Certification

DAWIA Level II PM Certification Requirements	
Course	**Skills**
ACQ 201A	Acquisition Planning & Strategy
ACQ 201B (R)	Acquisition Planning & Strategy
PMC 250 (R)	Project Team Leadership Techniques
	Scheduling
	Procurement
	Risk Management
	Earned Value Management
CON 110	Procurement
	Market Research
	Acquisition Planning & Strategy
SAM/IRM 101	Software Acquisitions / Information Technology

Table 27. Skills Taught in DAWIA Level II Certification

Assuming that all the skills listed in these tables were adequately covered, after receiving DAWIA Level II Certification, nine required skills were yet to be addressed. A review of the DAU course catalog allowed for a means of identifying courses capable of teaching these skills. The following Courses and CL Modules addressed some of the remaining skills.

Acquisition Logistics Fundamentals (LOG 101) – This online course taught its students the basic role of logistics in the acquisition process. It addressed the logistics life cycle, sustainment and support among other logistics considerations during its 24 hours of instruction (DAU, LOG 101). While it did not address performance based logistics, its successor course did and therefore, when both are taken, it was determined that Life Cycle Logistics, PBL, Sustainment & Disposal was adequately covered.

Systems Sustainment Management Fundamentals (LOG 102) – The successor to LOG 101, this course expanded upon the knowledge previously taught and discussed supply chain considerations, maintenance planning, weapon systems sustainment and performance-based support. The course was intended to take 23 hours of self paced instruction to complete (DAU, LOG 102). Completion of this course provided students a baseline understanding of Maintenance & Supply Planning.

Fundamentals of Test and Evaluation (TST 102) – This 18-hour course provided students with the basic principles, policies, processes and practices for Test and Evaluation in defense acquisitions. Before taking this course, students were required to complete either CLE 011 (Modeling and Simulation in Systems Engineering) or CLE 023 (Modeling and Simulation for Test and Evaluation) (DAU, TST 102); both of which were three hour CL Modules (DAU, CLE 001; CLE 023). After successful completion of TST 102, students received adequate instruction for the Test & Evaluation Process.

Defense Specification Management (PQM 103) – This nine-day resident course taught students how to develop requirements, standards and specifications for defense acquisitions (DAU, PQM 103). PQM 103 was the only course in the DAU catalog that directly addressed the details of specification writing. While this course seemed to provide great detail in the Specification Writing skill area, it was not readily offered. As of April 2010, there were no offerings scheduled for the remainder of the year. Therefore, while the training may have been adequate, the availability of this resident course resulted in it being rated below average.

Technical Reviews (CLE 003) – This three hour CL module laid a foundation for executing Technical Reviews throughout the acquisition framework

(DAU, CLE 003). Unfortunately DAU did not have a course within its catalog which specifically addressed milestone reviews. Therefore, the skill Milestones & Technical Reviews was considered to be taught below average through DAU.

Contract Source Selection (CLC 007) – This CL module provided students a three hour period of instruction specifically aimed at increasing the understanding of the source selection process (DAU, CLC 007). When combined with the knowledge gained in CON 110, it was determined that this CL Module adequately addresses the skill of Source Selection Planning & Execution.

In order to complete the training required for Levels I and II Certification, students needed approximately 250 days or 8.3 months. Completion of the remaining courses to achieve additional skills took an additional 130 days or 4.3 months. Achievement of the maximum educational benefit from DAU took approximately 12.6 months.

Analysis of the list of required skills compared to the course material available through DAU Courses and CL Modules determined that the following skills could not be adequately addressed through DAU instruction alone.

Below Average:

- Milestone & Technical Reviews
- Specification Writing

No Evidence of Instruction:

- Baseline Management
- Stakeholder Management

b. DAU per Student Cost

Due to the varying cost of DAU resident courses as a result of location offered, it was impossible to determine a standard cost per course. However, due to the close proximity of MARCORSYSCOM to the DAU headquarters and the large number of no-cost courses offered in the area, the direct cost for participation in a resident DAU

course for MARCORSYSCOM employees was considered zero. Therefore, the only cost associated with any DAU training was opportunity cost.

Completion of the necessary DAU Courses and CL Modules for Level II certification required 271.5 hours of study. According to command policy, acquisition professionals were authorized to use duty hours for developmental activities. Assuming that student's ability was improved by approximately 50% after completion of the Level II courses, 135.75 of these hours were lost opportunity hours. Without the ability to accurately identify what percentage of each rank participates in DAU courses, the opportunity cost associated with Level I and II DAU Courses and CL Modules was presented separately for each rank in Table 28.

All Cost Figures CY09$	Major	Capt	1st Lt	CWO 5	CWO 4	CWO 3	CWO 2
Assumed Years in Service	10	4	3	20	16	12	10
Base Salary	$6,025.20	$4,722.90	$4,012.50	$6,505.50	$5,514.60	$4,164.30	$4,018.80
Hourly Pay	$36.05	$28.26	$24.01	$38.93	$33.00	$24.92	$24.05
Opportunity Hours Lost	135.75	135.75	135.75	135.75	135.75	135.75	135.75
DAU Cost per Student	**$4,893.79**	**$3,836.30**	**$3,259.36**	**$5,284.75**	**$4,479.75**	**$3,382.89**	**$3,264.79**

Table 28. Level I and II DAU Cost per Student

To achieve the maximum educational benefit from the DAU track, acquisition professionals must complete the additional DAU Courses and CL Modules as listed in the previous section. These classes required an additional 135 hours of participation. With the same 50% improved ability as the Level I and II courses, 66 of those hours represented opportunity lost. Table 29 displays the additional cost per student participating in the DAU track and Table 30 combines the results of Table 28 and Table 29 to present the overall cost per student per rank participating in the DAU track as well as a non-weighted average cost for participation. The non-weighted average cost for a student participating in DAU alone was $6,030.02.

All Cost Figures CY09$	Major	Capt	1st Lt	CWO 5	CWO 4	CWO 3	CWO 2
Assumed Years in Service	10	4	3	20	16	12	10
Base Salary	$6,025.20	$4,722.90	$4,012.50	$6,505.50	$5,514.60	$4,164.30	$4,018.80
Hourly Pay	$36.05	$28.26	$24.01	$38.93	$33.00	$24.92	$24.05
Opportunity Hours Lost	66	66	66	66	66	66	66
DAU Cost per Student	**$2,379.30**	**$1,865.16**	**$1,584.66**	**$2,569.38**	**$2,178.00**	**$1,644.72**	**$1,587.30**

Table 29. Additional DAU Cost per Student

All Cost Figures CY09$	Major	Capt	1st Lt	CWO 5	CWO 4	CWO 3	CWO 2
Level I & II DAU Cost per Student	$4,893.79	$3,836.30	$3,259.36	$5,284.75	$4,479.75	$3,382.89	$3,264.79
Additional DAU Cost per Student	$2,379.30	$1,865.16	$1,584.66	$2,569.38	$2,178.00	$1,644.72	$1,587.30
Total DAU Cost per Student	**$7,273.09**	**$5,701.46**	**$4,844.02**	**$7,854.13**	**$6,657.75**	**$5,027.61**	**$4,852.09**
							$6,030.02

Table 30. Total DAU Cost per Student

4. Command Mentorship Program

a. Mentorship Student Benefit

Participation in the Command Mentorship Program afforded mentees a unique opportunity to enhance their acquisition skills and knowledge in a series of one-on-one interactions with experienced acquisition professionals over the course of 12 months. According to the mentoring contract and action plan included in Appendix C, the mentor and mentee agree to meet for at least one to two hours per month for the purpose of achieving mutually agreed upon goals. While participation in the program does not guarantee the mentee learns any of the required job skills, its *potential* benefit for the mentee lies in the opportunity for development and access to knowledge and experience the program provides. However, the amount of potential benefit the mentee realizes can be directly attributable to the amount of time and effort both the mentee and mentor contribute to participation in the program; the greater the level of participation, the greater the potential benefit to the mentee.

An additional limit to the benefit of the mentorship program was the consistency of the material addressed from mentee to mentee. The goals established in

the mentorship action plan are left to the sole discretion of the mentee and mentor. While this arrangement allows for the greatest flexibility in the mentorship relationship, it runs the risk of focusing the potential growth in skill areas adequately covered by other means of professional development.

Despite these two potential limitations to the benefit of a mentor/mentee relationship, it cannot be overlooked that each mentor is an experienced acquisition professional within Marine Corps Systems Command. No matter how experienced, a professor from an institution of higher learning cannot have the perspective and insight of a mentor from within the organization. Therefore, if it was assumed that a mentor and mentee both dedicate adequate time and effort towards the relationship, it must be determined that mentorship possessed the greatest potential for targeted professional growth in knowledge areas where other methods were lacking

While mentorship had the potential to provide significant educational benefits, according to the survey, only three participants indicated that they took part in the command's mentorship program. As such, it was determined that for active duty acquisition professionals, participation in the mentorship program did not provide nearly as much benefit as it potentially could.

Finally, due to the lack of consistent and defined learning material covered when participating in a mentor/mentee relationship, mentorship was not identified as an exclusive method of training. Instead, the command mentorship program could be utilized to augment the other primary training methods.

b. Mentorship per Participant Cost

While there were no direct costs associated with participation in the Command Mentorship Program, participants were expected to spend time with their mentor on a recurring basis over the course of one year so there was an opportunity cost associated with participation in the program. The actual frequency of meeting with mentors varied greatly and made calculating accurate opportunity cost difficult. However, mentees were encouraged to meet for at least one to two hours per month. Without being able to accurately quantify the benefit each participant received from the

mentorship relationship and for the benefit of determining the highest potential cost of program participation, it was assumed that all of a mentee's time spent in mentorship (roughly 24 hours) was opportunity lost. Table 31 displays the highest estimated opportunity cost per officer participating in the mentorship program.

All Cost Figures CY09$	Major	Capt	1st Lt	CWO 5	CWO 4	CWO 3	CWO 2
Assumed Years in Service	10	4	3	20	16	12	10
Base Salary	$6,025.20	$4,722.90	$4,012.50	$6,505.50	$5,514.60	$4,164.30	$4,018.80
Hourly Pay	$36.05	$28.26	$24.01	$38.93	$33.00	$24.92	$24.05
Opportunity Hours Lost	24	24	24	24	24	24	24
Highest Est. Mentorship Cost	**$865.20**	**$678.24**	**$576.24**	**$934.32**	**$792.00**	**$598.08**	**$577.20**

Table 31. Highest Estimated Mentorship Cost per Participant

VI. CONCLUSION AND RECOMMENDATIONS

A. INTRODUCTION

This research project conducted a thorough analysis of the skills necessary to perform effectively as an acquisition professional and evaluated four different training opportunities to determine which provided the most necessary skills at the greatest cost effectiveness for the Marine Corps Systems Command. A survey of current and former military acquisition professionals was conducted to identify necessary skills from the employee perspective and evaluate the effectiveness of various training methods. Data from each of the organizations providing training were collected and utilized to amplify, confirm and expand upon the survey results. The focus of analysis chapter was to determine how successful each training opportunity was at providing student the required skills to be an adequately trained acquisition professional in a cost-effective manner. The following conclusions and recommendation were derived from analysis and intended to provide MARCORSYSCOM with direction for potential future workforce improvement.

B. BEST VALUE

1. Conclusion

While at seven months, AAP was not the shortest track to achieve adequate level of training (PMC takes roughly six months), it was the most cost effective per student by a significant margin. However, as seen with PMC (see Table 19), the direct cost of training per student grew significantly as enrollment decreased. AAP provided additional value to both the student as well as the command due to the method of delivery, which did not require that students dedicate 100% of their working time to education during participation.

The DAU training path provided the most required skills at an adequate level; however, there was no good measure of how well each individual skill was taught, rather, only an indication of whether or not it was. Both PMC and AAP taught the fourth and

ninth most-required skills (Systems Fielding Process and Source Selection Planning & Execution, respectively) at a level below average. PMC had two additional top ten required skills rated below average or unacceptable, to include the most important skill of Procurement. AAP only had one other top ten skills taught below average.

According to analysis, the training method that provided the best value to the command was the Advanced Acquisition Program offered by the Naval Postgraduate School. Not only did AAP provide the best coverage of the most required skills, but it did so with significantly less time commitment, reducing opportunity cost and increasing student productivity during times when not in class.

2. Recommendation

As the course providing the best value to the command, it is strongly recommended that MARCORSYSCOM continue to offer new acquisition professionals the opportunity to participate in AAP. In doing so, the command should only schedule AAP sessions to take place if enrollment is high enough to ensure the cost per student remains low. Additionally, it may be of value to pursue an expansion of the current training relationship with the Naval Postgraduate School in attempt to address the job skills not adequately trained by this track.

C. CERTIFICATION REQUIREMENT

1. Conclusion

While it was not required by law, a first tour military acquisition professional assigned to MARCORSYSCOM for at least two years was afforded the time and resources to achieve DAWIA Level II Certification in Program Management. It was established that the course load, regardless of education track, could be completed within the first two years of assignment to the command. Furthermore, Level II Certification only required two years of experience, one of which could be fulfilled with a bachelor's degree or higher. Of the survey participants polled, 75% indicated they had previously been awarded at least a bachelor's degree. This percentage would be eligible for Level II

Certification within 12 months with the remaining 25% being eligible at 24 months. Therefore, it was concluded that there was no impediment for a military officer to achieve DAWIA Level II Certification in Program Management within a two or more year tour at MARCORSYSCOM.

2. Recommendation

MARCORSYSCOM already affords participants an opportunity to achieve DAWIA Level II Certification in Program Management. However, it is still not a mandatory certification for acquisition professionals below the rank of Major. Therefore, Marine Officers fitting this category could simply achieve a Level I Certification and progress no further. According to the survey results, 13 of 38 (34%) respondents indicated they progressed no further than Level I. This results in greater than one third of the first tour military officers within the command working at a less than efficient productivity level. As such, it is recommended that the command make a policy requiring all military officers filling acquisition professional billets achieve DAWIA Level II Certification in Program Management no later than 30 months after initial assignment to MARCORSYSCOM. This will help facilitate maximum effective productivity by the military acquisition workforce.

D. ADEQUATE TRAINING

1. Conclusion

Analysis of required skill achievement was done under the assumption that students followed a track which will at least result in the education required for a DAWIA Level II Certification in Program Management. A thorough analysis of all possible training tracks indicated that no single method of training provided acquisition professionals with all the required skills. Even though AAP represented the best training track for new MARCORSYSCOM employees, the following evaluated skill gaps remained:

Below Average:

- Source Selection Planning & Execution
- Project Team Leadership Techniques
- Market Research

Unacceptable:

- Maintenance & Supply Planning
- Systems Fielding Process
- Specification Writing

In addition to the above gaps, the newly identify skill of Stakeholder Management was required to be learned as well. Therefore, seven skills required training in addition to that provided by the AAP track.

The following DAU Courses and CL Modules could potentially be utilized to facilitate adequate training on some of these skills. Source Selection Planning & Execution was addressed in Contract Source Selection (CLC 007). Where Mission-Support Planning (CON 110) fell short in instruction on Market Research, CLC 004 provided additional instruction solely focused on Market Research. Maintenance & Supply Planning was addressed adequately in LOG 102. Finally, Improved Statement of Work (CLM 031) could be utilized to improve Specification Writing. PQM 103 would be preferred for this skill but being a resident course with few offerings, it was unrealistic to believe all acquisition professionals can participate; therefore it was not further considered. Of the above mentioned DAU Courses and CL Modules, only CLM 031 was currently required by the command to receive APD Level B Certification (LOG 102 was in the DAU Level II Core Plus list but not specifically required). Without having to repeat PMT 250, the remaining two skills, Project Team Leadership Techniques and Systems Fielding Process, did not correspond directly to DAU training available in the AAP track.

2. Recommendation

The command identified that simply achieving DAWIA Level II Certification in Program Management was not necessarily enough to be adequately trained when it established the Advanced Professional Development (APD) certification levels in the PMCD Guide. While the level of this program awareness was not able to be determined by this research, it was recognized as an incentive for employees to pursue advanced professional development. As such, it is recommended that the Program Management Competency further advertise the program and encourage acquisition professionals to achieve APD levels appropriate for their DAWIA Certification level.

It is further recommended that the requirements to achieve both APD Level C and Level B are revised as follows. In addition to CLC 011 and CLM 017, individuals pursuing APD Level C should also be required to complete CLC 007 to ensure they adequately address instruction on effective Source Selection Planning & Execution. For APD Level B it is recommended that CLC 004 and LOG 102 are added to the required courses to effectively address Market Research and Maintenance & Support Planning.

As Project Team Leadership Techniques and the Systems Fielding Process are not addressed with the previous recommendations, it is recommended that they be addressed to some degree during any program management mentorship relationship.

E. MENTORSHIP

1. Conclusion

Mentorship provided a training opportunity to specifically target skill areas lacking in professional training methods such as Stakeholder Management or Source Selection Planning and Execution. Additionally, active duty acquisition professionals were not taking advantage of the educational benefit which mentorship could provide. This was potentially because Marine Corps Systems Command did not adequately advertise the mentorship program and its benefits to the military population of the command, as indicated by the low percentage of survey participants who identified

having been part of the mentorship program. Unfortunately, research was unable to determine if the mentorship program has the capacity to facilitate a significant increase in new mentee participation.

2. Recommendation

As a result of the lack of military participation in the Command Mentorship Program, and the potential benefit mentorship could provide the acquisition professional, it is recommended that the command initiate a campaign to inform new active duty employees of the benefit and availability of the mentorship program. Furthermore, to maximize the effectiveness of the program, mentors and mentees should be provided with a list of recommended topics which include addressing the skills inadequately trained by the AAP track, such as Project Team Leadership Techniques and the Systems Fielding Process. By providing these recommended topics and associated goals, the mentor and mentee are still granted the flexibility to focus on areas as they see fit, but they are also made aware of common areas often requiring additional training.

While its current status was unknown, if the command mentorship program is unable to facilitate a significant increase in new mentee participation, it is recommended that MARCORSYSCOM initiate an awareness campaign targeting new mentors, ultimately seeking to increase the availability of the program. These new mentors should include a combination of senior civilian acquisition professionals as well as active duty Marines who have earned the MOS 8059, Acquisition Management Professional.

APPENDIX A. SURVEY QUESTIONS

Analysis of the Training Provided to First Time Military Acquisition Professionals at Marine Corps Systems Command

Page 1 - Heading

Informed Consent

Please read this entire page prior to proceeding.

You are invited to participate in a study entitled Analysis of the Training Provided to First Time Military Acquisition Professionals at Marine Corps Systems Command.

Your participation in this survey will be used to establish the relative perceived value of the various training method formerly and currently employed by Marine Corps Systems Command. The results will allow for analysis aimed at determining the most cost effective means to train new military acquisition professionals at Marine Corps Systems Command. This survey is Web based and will take approximately 20 minutes to complete.

Page 1 - Heading

Risks. The potential risk of participating in this study is a potential breach of confidentiality. Some participants may still be employed by the command of which they are providing their opinion. A breach of confidentiality could result in unnecessary hardships while employed within the command. However, this risk is being mitigated by the anonymous nature of the survey.

Benefits. This study may aid Marine Corps Systems Command in future training programs, improving the effectiveness of future military acquisition professionals.

Compensation. No tangible compensation will be given. A copy of the research results will be available at the conclusion of the study. Directions on requesting a copy of the final report are included in the survey.

Page 1 - Heading

Confidentiality & Privacy Act. Any information that is obtained during this study will be kept confidential to the full extent permitted by law. All efforts, within reason, will be made to keep your personal information in your research record confidential but total confidentiality cannot be guaranteed. During the conduct of the survey, your personal information will not be collected. Your answers will be collected under a unique session identification number randomly assigned by the survey software. At no time will your private information be associated with the data you provide. Answers provided will be collected in a password protected database that will only reference the information you provide through your uniquely assigned identification number. Every attempt to safeguard personal information will be made; however, it is possible that the researcher may be required to divulge information obtained in the course of this research to the subject's chain of command or other legal body.

Points of Contact. I understand that if I have any questions or comments regarding this project upon the completion of my participation, I should contact the Principal Investigator, Keith Snider, 831-656-3621, ksnider@nps.edu, or Co-Investigator, Joseph Shusko, 703-432-3603, joseph.r.shusko@usmc.mil. Any other questions or concerns may be addressed to the Navy Postgraduate School. IRB Chair, LCDR Paul O'Connor, 831-656-3864, peoconno@nps.edu.

Statement of Consent. The purpose, procedures, and duration of participation in this research project have been fully explained. I understand how my identification will be safeguarded and have had all my questions answered. I understand that by agreeing to participate in this research, I do not waive any of my legal rights.

By continuing with the survey, I am acknowledging that I have read and understand the above information and that I agree to voluntarily participate in this online survey. I also understand that I may discontinue at any time by exiting this Web site.

Page 2 - Heading

Section 1 - Background

Page 2 - Question 1 - Choice - One Answer (Drop Down)

What rank were you when you were first assigned to an Acquisition Professional position at MARCORSYSCOM?

- ○ Cpl
- ○ Sgt
- ○ SSgt
- ○ GySgt
- ○ MSgt/1stSgt
- ○ MGySgt/SgtMaj
- ○ WO/CWO
- ○ 2ndLt
- ○ 1stLt
- ○ Capt
- ○ Maj
- ○ LtCol

Page 2 - Question 2 - Open Ended - One Line

What was your MOS when you were first assigned to an Acquisition Professional position at MARCORSYSCOM?

Page 2 - Question 3 - Yes or No

When you were first assigned to an Acquisition Professional position at MARCORSYSCOM, had you already received a Bachelor's degree?

- ○ Yes
- ○ No
- ○ What major?

Page 2 - Question 4 - Choice - One Answer (Drop Down)

Please indicate your highest level of education achieved prior to your first assignment as an Acquisition Professional position at MARCORSYSCOM.

- ○ High School Diploma or GED
- ○ Associates Degree
- ○ Bachelors Degree
- ○ Masters Degree
- ○ Doctorate Degree

Page 2 - Question 5 - Yes or No

Were you assigned to MARCORSYSCOM as a part of the Special Education Program (SEP) after completing a Master's Degree Program at the Naval Postgraduate School (NPS)?

- ○ Yes
- ○ No
- ○ What degree did you receive?

Page 2 - Question 6 - Choice - One Answer (Drop Down)

How long was your first tour as an Acquisition Professional at MARCORSYSCOM?

- ○ Less than 1 Year
- ○ 1-2 Years
- ○ 2-3 Years
- ○ Greater than 3 Years

Page 2 - Question 7 - Choice - One Answer (Drop Down)

In what Product Group, Program Management Office or PEO did you primarily serve while during your first tour as an Acquisition Professional at MARCORSYSCOM (Select the best answer)?

- ○ PG-9 (Operational Forces Systems)
- ○ PG-10 (Information Systems & Infrastructure)
- ○ PG-11 (MAGTF C2, Weapons & Sensor Development & Integration)
- ○ PG-12 (Communication, Intelligence, & Networking Systems)
- ○ PG-13 (Infantry Weapon Systems)
- ○ PG-14 (Armor & Fire Support Systems)
- ○ PG-15 (Ground Transportation & Engineer Systems)
- ○ PG-16 (Combat Equipment & Support Systems)
- ○ PM Ammo
- ○ PM Ground Combat Support Systems - Marine Corps
- ○ PM Light Armored Vehicle
- ○ PM Mine Resistant Ambush Protected
- ○ PM Robotic Systems
- ○ PM Training Systems
- ○ JPEO Chemical & Biological Defense
- ○ PEO Land Systems
- ○ Assistant Commander for Contracts
- ○ Assistant Commander for Life Cycle Logistics
- ○ Assistant Commander for Programs
- ○ Deputy Commander for SIAT
- ○ Deputy Commander Resource Management
- ○ International Programs
- ○ Counter-Improvised Explosive Device
- ○ Other

Page 2 - Question 8 - Yes or No

Before your first assignment as an Acquisition Professional at MARCORSYSCOM, did you have any prior acquisition or program management experience?

- ○ Yes
- ○ No

Page 2 - Question 9 - Choice - One Answer (Drop Down)

Upon completing your first tour as an Acquisition Professional at MARCORSYSCOM, what DAWIA Certification Level had you achieved in the Program Management Career Field?

- ○ None
- ○ I
- ○ II
- ○ III
- ○ Don't Know/Don't Remember

Page 2 - Question 10 - Choice - One Answer (Drop Down)

If available, did you receive the secondary MOS 8057, Acquisition Professional Candidate, during your first tour as an Acquisition Professional at MARCORSYSCOM?

- ❍ Yes
- ❍ No
- ❍ Not Available
- ❍ Don't Know/Don't Remember

Page 3 - Heading

Section 2 - Job Requirements

Page 3 - Question 11 - Rating Scale - Matrix

On a scale of 1 to 5 (1 being least important, 5 being most important), please rate the following areas on their importance to you in the execution of your job as a Project Officer.

	Least Important	2	3	4	Most Important
Requirements Generation Process (JCIDS)	❍	❍	❍	❍	❍
DoD Acquisition Framework (DoD 5000 Series)	❍	❍	❍	❍	❍
Baseline Management (APB)	❍	❍	❍	❍	❍
Project Team Leadership Techniques	❍	❍	❍	❍	❍
Acquisition Planning & Strategy	❍	❍	❍	❍	❍
Software Acquisitions / Information Technology	❍	❍	❍	❍	❍
Budget/Financial Management (PPBE, POM Development, Benchmark Management)	❍	❍	❍	❍	❍
Scheduling	❍	❍	❍	❍	❍
Market Research	❍	❍	❍	❍	❍
Cost Estimating / Cost Analysis	❍	❍	❍	❍	❍
Risk Management	❍	❍	❍	❍	❍
Earned Value Management	❍	❍	❍	❍	❍
Systems Engineering Process	❍	❍	❍	❍	❍
Specification Writing (Performance Specification/Purchase Descriptions)	❍	❍	❍	❍	❍
Lean Six Sigma Principles	❍	❍	❍	❍	❍
Procurement (SOW/SOO, Performance Specifications, Contracting)	❍	❍	❍	❍	❍
Source Selection Planning & Execution	❍	❍	❍	❍	❍
Test & Evaluation Process	❍	❍	❍	❍	❍
Lifecycle Logistics, PBL, Sustainment & Disposal	❍	❍	❍	❍	❍
Maintenance & Supply Planning	❍	❍	❍	❍	❍

Systems Fielding Process	❍	❍	❍	❍	❍
Milestones & Technical Reviews	❍	❍	❍	❍	❍
Configuration Control / Quality Control	❍	❍	❍	❍	❍

Page 3 - Question 12 - Open Ended - Comments Box

If there are additional skills that you feel necessary to be a successful Project Officer, please indicate below.

Page 4 - Heading

Section 3 - Basic MARCORSYSCOM Education Opportunities

Page 4 - Question 13 - Yes or No

When you were first assigned as an Acquisition Professional at MARCORSYSCOM, did the command provide you with formal training to conduct your job as a Project Officer?

- ❍ Yes
- ❍ No

Page 4 - Question 14 - Yes or No

Did you participate in the Project Management Certificate (PMC) Course offered by Florida Institute of Technology (commonly called FIT)?

- ❍ Yes
- ❍ No

Page 4 - Question 15 - Yes or No

Did you participate in the Advanced Acquisition Program (AAP) offered by the Naval Postgraduate School?

- ❍ Yes
- ❍ No

Page 4 - Question 16 - Yes or No

ANSWER ONLY IF YOU ANSWERED NO TO BOTH OF THE PREVIOUS 2 QUESTIONS. IF YOU ANSWERED YES TO EITHER OF THE PREVIOUS TWO QUESTIONS, SKIP TO QUESTION #17.
If you answered no to both of the above questions, was there another class (other than DAU classes and instruction by MARCORSYSCOM employees) that you attended for entry-level training?

- ❍ Yes
- ❍ No
- ❍ If so, please indicate course title and with whom it was offered.

Page 4 - Question 17 - Yes or No

Were you ONLY offered classes through Defense Acquisition University? (If you answered yes to questions 14, 15 or 16, your answer here should be 'no')

- ○ Yes
- ○ No

Page 5 - Heading

Section 4(a) - Project Management Certificate Course, Florida Institute of Technology (PMC (FIT)) Specific Questions
If you did not participate in PMC (FIT), please proceed to question # 27 on the next page.

Page 5 - Question 18 - Date and Time

When (Month/Year) did you begin PMC (FIT) (Best estimate)? (Ignore the date and time drop downs)

	Month	Year
Month/Year		

Page 5 - Question 19 - Choice - One Answer (Drop Down)

How long had you been at MARCORSYSCOM prior to participation in PMC (FIT)?

- ○ 1-3 Months
- ○ 4-6 Months
- ○ 7-9 Months
- ○ 10-12 Months
- ○ >1 Year

Page 5 - Question 20 - Yes or No

Had you taken any DAU Classes prior to attending PMC (FIT)?

- ○ Yes
- ○ No
- ○ If so, list to the best of your knowledge.

Page 5 - Question 21 - Yes or No

Did you successfully complete PMC (FIT) with a grade of B or higher?

- ○ Yes
- ○ No

Page 5 - Question 22 - Rating Scale - Matrix

On a scale of 1-5, 1 being lowest quality, 5 being highest quality, comment on the quality of the following aspects of the PMC (FIT) course of instruction. In your answer, consider how effective the course was at training you to do your eventual job.

	Lowest Quality	2	3	4	Highest Quality
Course material	❍	❍	❍	❍	❍
Method of presentation (i.e., Live classroom, Video Teleconference, Online, etc)	❍	❍	❍	❍	❍
Instructor's presentation of course material	❍	❍	❍	❍	❍
Instructor's knowledge of course material	❍	❍	❍	❍	❍
Instructor's experience with course material	❍	❍	❍	❍	❍
Effectiveness of time spent in each class	❍	❍	❍	❍	❍
Efficiency of the overall program organization	❍	❍	❍	❍	❍

Page 5 - Question 23 - Rating Scale - One Answer (Horizontal)

On a scale of 1-3, comment on the following statement.

The overall PMC (FIT) course length was adequate, too long, or not long enough for the material covered.

Not Long Enough	Just Right	Too Long
❍	❍	❍

Page 5 - Question 24 - Rating Scale - Matrix

Please indicate whether you agree or disagree with the following statements.

	Agree	Disagree
PMC (FIT) was an effective and efficient method of training new MARCORSYSCOM Project Officers.	❍	❍
PMC (FIT) challenged me intellectually.	❍	❍
PMC (FIT) provided me all or most of the tools I needed to do my job as a Project Officer at MARCORSYSCOM.	❍	❍

Page 5 - Question 25 - Rating Scale - Matrix

On a scale of 1 to 3 (1 being poor, 3 being great), please rate how PMC (FIT) prepared you to be a Project Officer in the following areas.

	Poor	Adequate	Great	Area Not Covered
Requirements Generation Process (JCIDS)	❍	❍	❍	❍
DoD Acquisition Framework (DoD 5000 Series)	❍	❍	❍	❍
Baseline Management (APB)	❍	❍	❍	❍
Project Team Leadership Techniques	❍	❍	❍	❍
Acquisition Planning & Strategy	❍	❍	❍	❍
Software Acquisitions / Information Technology	❍	❍	❍	❍
Budget/Financial Management (PPBE, POM Development, Benchmark Management)	❍	❍	❍	❍

Scheduling	❍	❍	❍	❍
Market Research	❍	❍	❍	❍
Cost Estimating / Cost Analysis	❍	❍	❍	❍
Risk Management	❍	❍	❍	❍
Earned Value Management	❍	❍	❍	❍
Systems Engineering Process	❍	❍	❍	❍
Specification Writing (Performance Specification/Purchase Descriptions)	❍	❍	❍	❍
Lean Six Sigma Principles	❍	❍	❍	❍
Procurement (SOW/SOO, Performance Specifications, Contracting)	❍	❍	❍	❍
Source Selection Planning & Execution	❍	❍	❍	❍
Test & Evaluation Process	❍	❍	❍	❍
Lifecycle Logistics, PBL, Sustainment & Disposal	❍	❍	❍	❍
Maintenance & Supply Planning	❍	❍	❍	❍
Systems Fielding Process	❍	❍	❍	❍
Milestones & Technical Reviews	❍	❍	❍	❍
Configuration Control / Quality Control	❍	❍	❍	❍

Page 5 - Question 26 - Choice - One Answer (Drop Down)

Indicate what percentage of material presented during PMC (FIT) directly contributed to your ability to learn the execution of your job as a Project Officer.

- ❍ 0%
- ❍ 20%
- ❍ 40%
- ❍ 60%
- ❍ 80%
- ❍ 100%

Page 6 - Heading

Section 4(b) - Advanced Acquisition Program (AAP) Specific Questions
If you did not participate in AAP, please proceed question # 38 on the next page.

Page 6 - Question 27 - Date and Time

When (Month/Year) did you begin AAP (Best estimate)? (Ignore the date and time drop downs)

	Month	**Year**
Month/Year		

Page 6 - Question 28 - Choice - One Answer (Drop Down)

How long had you been at MARCORSYSCOM prior to participation in AAP?

- ❍ 1-3 Months
- ❍ 4-6 Months
- ❍ 7-9 Months
- ❍ 10-12 Months
- ❍ >1 Year

Page 6 - Question 29 - Yes or No

Had you taken any DAU Classes prior to attending AAP?

- ❍ Yes
- ❍ No
- ❍ If so, list to the best of your knowledge.

Page 6 - Question 30 - Yes or No

Did you successfully complete AAP with a grade of B or higher?

- ❍ Yes
- ❍ No

Page 6 - Question 31 - Rating Scale - Matrix

On a scale of 1-5, 1 being lowest quality, 5 being highest quality, comment on the quality of the following aspects of the AAP course of instruction. In your answer, consider how effective the course was at training you to do your eventual job.

	Lowest Quality	2	3	4	Highest Quality
Course material	❍	❍	❍	❍	❍
Method of presentation (i.e., Live classroom, Video Teleconference, Online, etc)	❍	❍	❍	❍	❍
Instructor's presentation of course material	❍	❍	❍	❍	❍
Instructor's knowledge of course material	❍	❍	❍	❍	❍
Instructor's experience with course material	❍	❍	❍	❍	❍
Effectiveness of time spent in each class	❍	❍	❍	❍	❍
Efficiency of the overall program organization	❍	❍	❍	❍	❍

Page 6 - Question 32 - Rating Scale - One Answer (Horizontal)

On a scale of 1-3, comment on the following statement.

The overall AAP course length was adequate, too long, or not long enough for the material covered.

Not Long Enough	Just Right	Too Long
❍	❍	❍

Page 6 - Question 33 - Rating Scale - Matrix

Please indicate whether you agree or disagree with the following statements.

	Agree	Disagree
AAP was an effective and efficient method of training new MARCORSYSCOM Project Officers.	❍	❍
AAP challenged me intellectually.	❍	❍
AAP provided me all or most of the tools I needed to do my job as a Project Officer at MARCORSYSCOM.	❍	❍

Page 6 - Question 34 - Rating Scale - Matrix

On a scale of 1 to 3 (1 being poor, 3 being great), please rate how AAP prepared you to be a Project Officer in the following areas.

	Poor	Adequate	Great	Area Not Covered
Requirements Generation Process (JCIDS)	❍	❍	❍	❍
DoD Acquisition Framework (DoD 5000 Series)	❍	❍	❍	❍
Baseline Management (APB)	❍	❍	❍	❍
Project Team Leadership Techniques	❍	❍	❍	❍
Acquisition Planning & Strategy	❍	❍	❍	❍
Software Acquisitions / Information Technology	❍	❍	❍	❍
Budget/Financial Management (PPBE, POM Development, Benchmark Management)	❍	❍	❍	❍
Scheduling	❍	❍	❍	❍
Market Research	❍	❍	❍	❍
Cost Estimating / Cost Analysis	❍	❍	❍	❍
Risk Management	❍	❍	❍	❍
Earned Value Management	❍	❍	❍	❍
Systems Engineering Process	❍	❍	❍	❍
Specification Writing (Performance Specification/Purchase Descriptions)	❍	❍	❍	❍
Lean Six Sigma Principles	❍	❍	❍	❍
Procurement (SOW/SOO, Performance Specifications, Contracting)	❍	❍	❍	❍
Source Selection Planning & Execution	❍	❍	❍	❍
Test & Evaluation Process	❍	❍	❍	❍
Lifecycle Logistics, PBL, Sustainment & Disposal	❍	❍	❍	❍
Maintenance & Supply Planning	❍	❍	❍	❍
Systems Fielding Process	❍	❍	❍	❍
Milestones & Technical Reviews	❍	❍	❍	❍
Configuration Control / Quality Control	❍	❍	❍	❍

Page 6 - Question 35 - Choice - One Answer (Drop Down)

Indicate what percentage of material presented during AAP directly contributed to your ability to learn the execution of your job as a Project Officer.

- ○ 0%
- ○ 20%
- ○ 40%
- ○ 60%
- ○ 80%
- ○ 100%

Page 6 - Question 36 - Yes or No

During AAP, were you able to productively apply material learned on days when you were not in class?

- ○ Yes
- ○ No

Page 6 - Question 37 - Choice - One Answer (Drop Down)

If yes, estimate the increased percentage of productivity you realized as a result of the material learned.

- ○ 0%
- ○ 20%
- ○ 40%
- ○ 60%
- ○ 80%
- ○ 100%

Page 7 - Heading

Section 5 - Defense Acquisition University (DAU) Specific Questions
If you have not participated in ANY DAU classes (resident or non-resident), please proceed to forward to section 6.
Program Management Specific DAU Classes are limited to all courses required for any of the three DAWIA certifications. (Courses are ACQ 101, ACQ 201A, ACQ 201B, PMT 250, PMT 352, SYS 101, and SAM 101)
DAU provides Classes and Continuous Learning (CL) Modules. Classes have an average length of approximately 35 hours of instruction. CL Modules have an average length of approximately 3 hours. The following questions are specific to either Classes or CL Modules.

Page 7 - Question 38 - Yes or No

While during your first tour as an Acquisition Professional at MARCORSYSCOM, did you take any DAU classes (NOT DAU Continuous Learning Modules)?

- ○ Yes
- ○ No
- ○ If so, which courses (best estimate)? Indicate resident courses with the following: (R)

Page 7 - Question 39 - Yes or No

While during your first tour as an Acquisition Professional at MARCORSYSCOM, did you take any DAU Continuous Learning Modules?

- ❍ Yes
- ❍ No
- ❍ If so, which courses (best estimate)?

_____

Page 7 - Question 40 - Rating Scale - Matrix

Please rate on a scale of 1-3 (1 being least, 3 being most) how pertinent the information contained in the following was to your job as a Project Officer. If you did not utilize these training resources, please indicate.

	Least	2	Most	Did Not Utilize
Program Management Specific DAU Courses	❍	❍	❍	❍
Non-Program Management DAU Courses	❍	❍	❍	❍
DAU Continuous Learning Modules	❍	❍	❍	❍

Page 7 - Question 41 - Rating Scale - Matrix

Please rate on a scale of 1-3 (1 being least, 3 being most) how valuable the information contained in the following was to your job as a Project Officer. If you did not utilize these training resources, please indicate.

	Least	2	Most	Did Not Utilize
Program Management Specific DAU Courses	❍	❍	❍	❍
Non-Program Management DAU Courses	❍	❍	❍	❍
DAU Continuous Learning Modules	❍	❍	❍	❍

Page 8 - Heading

Section 6 - Additional Education & Training Opportunities

Page 8 - Question 42 - Rating Scale - Matrix

During your first tour as an Acquisition Professional at MARCORSYSCOM, did you participate in any of the following programs, organizations or events to advance your training or certification?

	Yes	No
Command Mentorship Program	❍	❍
Executive Leadership Development Program (ELDP)	❍	❍
Active membership in Project Management Institute (PMI)	❍	❍
Command or Directorate sponsored training off sites	❍	❍
Graduate level schooling in a Program Management related field paid for by MARCORSYSCOM	❍	❍

Page 8 - Question 43 - Rating Scale - Matrix

For each of the above events that you participated, rate on a scale of 1-3 (1 being least, 3 being most) the value they offered in learning the execution of your job as a Project Officer.

	Least	2	Most	N/A
Command Mentorship Program	❍	❍	❍	❍
Executive Leadership Development Program (ELDP)	❍	❍	❍	❍

Active membership in Project Management Institute (PMI)	❍	❍	❍	❍
Command or Directorate sponsored training off sites	❍	❍	❍	❍
Graduate level schooling in a Program Management related field paid for by MARCORSYSCOM	❍	❍	❍	❍

Page 8 - Question 44 - Yes or No

During your first tour as an Acquisition Professional at MARCORSYSCOM, did you achieve your 80 continuous learning point requirement for each 2 year period you served in a Program Management position?

- ❍ Yes
- ❍ No

Page 8 - Question 45 - Choice - One Answer (Drop Down)

What source of points contributed most to your achievement of your 80 continuous learning point requirement?

- ❍ PMC (FIT)
- ❍ AAP
- ❍ DAU Courses
- ❍ DAU Continuous Learning Modules
- ❍ MARCORSYSCOM Training Off Sites
- ❍ Training/Education offered outside of MARCORSYSCOM
- ❍ Other
- ❍ I did not achieve my 80 point requirement

Page 9 - Heading

Section 7 - Additional Information

Page 9 - Question 46 - Yes or No

In your opinion, was receiving DAWIA Level I Certification in the Program Management Career Field adequate training for the execution of your job at MARCORSYSCOM?

- ❍ Yes
- ❍ No
- ❍ If not, please indicate what information was lacking from the training you received to achieve DAWIA Level I Certification. Address only what you felt was lacking from Level I Certification.

Page 9 - Question 47 - Yes or No

In your opinion, was receiving DAWIA Level II Certification in the Program Management Career Field adequate training for the execution of your job at MARCORSYSCOM?

- ❍ Yes
- ❍ No
- ❍ If not, please indicate what information was lacking from the training you received to achieve DAWIA Level II Certification.

Page 9 - Question 48 - Yes or No

For all command sponsored Program Management educational opportunities, was your supervisor flexible with your work schedule to facilitate your training and/or education?

- ○ Yes
- ○ No

Thank You Page

Thank you for participating. Your feedback is important. The information you provide will be used to analyze the quality of training offered by MARCORSYSCOM and may be used to help improve future training opportunities.

If you would like a copy of the final report, please follow the below instructions. Completion is anticipated by August 2010.

Government employees and individuals affiliated with a research and development activity within the government or its associated contractors, subcontractors, or grantees under current U.S. government contract, may order from:

DEFENSE TECHNICAL INFORMATION CENTER
8725 John J. Kingman Road, STE 0944
Fort Belvoir, Virginia 22060-2218
800-225-3842
Email: msorders@dtic.mil
http://www.dtic.mil/dtic/order.html

Purchasing documents from DTIC requires registration. However, many theses, particularly those completed recently, are available in electronic format free at http://stinet.dtic.mil.

Private U.S. citizens without a federal contract may purchase copies from:

NATIONAL TECHNICAL INFORMATION SERVICE
U.S. Department of Commerce
5285 Port Royal Road
Springfield, Virginia 22161
800-553-6847
Email: orders@ntis.fedworld.gov
http://www.ntis.gov/help/ordermethods.asp

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX B. ADDITIONAL SURVEY RESPONSES

The following responses were those not fully displayed in Chapter IV.

12. If there are additional skills that you feel necessary to be a successful Project Officer, please indicate below.	
#	**Response**
1	Stakeholder Management. I put this in a different (external) class than project team leadership (internal). Management of stakeholder expectations and relationships is critical to achieving and executing an acquisition strategy.
2	Being able to integrate a team to accomplish multiple tasks, time management, people skills. Being able to work with people.
3	The ability to see the larger picture (how does my widget fit into the overall USMC structure). Additionally, need to be able to visualize and act (coordinate) with others affected by your program. The above are good skills but do not garauntee a PO will be able to be a team player.
4	Contract deliverable management, technical data procurement (including publications), and training material development.
5	NA
6	A sense of humor.
7	Formal contracting training, FBA training
8	Attending a NPS school, DAU courses, and a significant time of turnover are extremely valuable.
9	The skills listed above are good to know hoever MCSC does not have any local standards or forms to support businees processes making it hard as a project office to complete the mission.
10	Yes - Training prior to getting smacked in the face with this billet. Also - The main focus at MCSC should be a streamlining the acquisition process for all. There should be no reason that one PG should be able to field an asset faster than another PG. Should be a tracking process that identifys to the commander where the program is at and or the problems it is having internal or external that way focus is given instead of lip service..

11	Management of the UUNS process, while touching all the above skills, is somewhat unique to a Program of Record. This is not something that will be learned or accomplished with prior experience. It would be helpful to provide a short training class on the management and execution of UUNS programs. (Guidelines and expectations within JCIDS and MARCORSYSCOM in specific.) In general, the best skill for success in UUNS programs is to learn quickly and seek out all resources available from the command, product group, and team/project contractor support. Experience in product development experience in commercial business proved to be helpful as a basis for procuring the next generation materiel solution for the program.

46. In your opinion, was receiving DAWIA Level I Certification in the Program Management Career Field adequate training for the execution of your job at MARCORSYSCOM?

#	**Response**
1	The breadth of respnsibilities for a project officer is well beyond what can be captured in level I training.
2	only been here 7 months
3	Level II at a minimum for an ACAT 1 program.
4	Depth of coverage was lacking. The FIT was far too high-level and too accelerated for me as active duty military then moving into a position as a PO. It would have been much more helpful for me to have served alongside or under a more experienced civilian for a while.
5	Think there should be more courses in level one to include contracting, finance, and logistics classes included.
6	Level I certification concentrates too heavily on ACAT 1 & 2 programs and ignores the nuances that are necessary for ACAT 3 & 4 programs (the bulk of programs at MARCORSYSCOM).
7	Contract Management Information
8	Good intro, but not enough detail information to executive ACAT II program without expert help for PM.
9	Level I is nothing. Level II and III provide the academic context of what project/program officers encounter. My recomendation would be to have all field grade project officers/program officers get level III trained.

10	Spec, SOW/SOO, Source Selection
11	I have only been here for 4 months.
12	Need at least Level II
13	Specific MARCORSYSCOM training. The training was too broad and long and didn't pertain to my rapid acquisition program. As busy as project officers are, the time it took wasn't beneficial since it didn't directly related to MCSC nor my program's structure.
14	BCF Career Field
15	How we handle AAPs.
16	The POM / PR aspects of Program Management.
17	The classes provide great information and a foundation of true DoD aquistion however it was only a porton of what I need because, the majority of my work did not pertain to a program of record. DAIWA concentrates on ACAT level 1 and II course which MCSC is mostly ACAT level III and/or non-programs of records.
18	Felt that the accounting of the Level I certification was definitely lacking! The DAWIA Classes are good but should track CL Credits better - Personnel Shouldn't be able to do a thing unless CLs are registered. Management / employees should be brought together into a process were learning / mentoring is fostered - *Note that Supervisors & Workforce Development should also have to account or address any of these problems for a solution. Make them do there job.. Otherwise, employees / management are just marking time and not moving forward "learning"..
19	There are just some things you can not learn on line. may program are not textbook programs that follow the acq process step by step. Especially in a war time environment. Even senior leadership does not have a process to handle Urgent needs.

47. In your opinion, was receiving DAWIA Level II Certification in the Program Management Career Field adequate training for the execution of your job at MARCORSYSCOM?	
#	**Response**
1	For most project officers in their first tour this should be sufficient formal training.

2	Again think there should be additional classes in additional subjects as answered above under question 46.
3	See answer above.
4	Unsure.
5	Sufficient information and experience to execute ACAT II or higher with minimum of assistance from PM.
6	I don't have any specific details for what is lacking. Level II is better than level I. Level III should be the desired level.
7	I don't have that yet.
8	n/a
9	BCF Career Field
10	The classes provide great information and a foundation of true DoD aquistion however it was only a porton of what I need because, the majority of my work did not pertain to a program of record. DAIWA concentrates on ACAT level 1 and II course which MCSC is mostly ACAT level III and/or non-programs of records.
11	The DAWIA Classes are good but should be tracked better. Again - accounting of the Level II certification is definitely lacking! I completed my Program Management Cert in Jan of 2007 and still have yet to receive Level II certification. WFD is Broke! No checks & balances "there just doing there own thing" no follow up or follow through to initial counciling - should be a roadmap laid out for both the employee and the supervisor - so that focus on the process is maintained!
12	I did not receive level II cert.

APPENDIX C. MENTORSHIP DOCUMENT TEMPLATE

Mentoring Contract

This agreement is made this date between the first and second parties and solidifies, once delivered to the mentor program coordinator, participation in the Marine Corps Systems Command's formal mentoring program. This is not a legally binding contract and may be modified or discontinued for any reason, at any time, by either party, upon notice and without penalty or injury.

First party, herein after referred to as: *The Mentor*		Second Party, herein after referred to as: *The Mentored Employee*	
Name:		Name:	
Phone #:		Phone #:	
Career Field:		Career Field:	
Position Title:		Position Title:	
Grade:		Grade:	
Signature	Date	Signature	Date

Both the Mentor and the Mentored Employee agree to:

CONFIDENTIALITY. The information shared between the Mentor and Mentored employee should remain confidential and will not be shared without the consent of the other.

A TERMINAL "FORMAL" RELATIONSHIP. This mentoring relationship is expected to last for twelve (12) months and will coincide with the:

- ☐ 1st Cycle (January – January)
- ☐ 2nd Cycle (April – April)
- ☐ 3rd Cycle (July – July)
- ☐ 4th Cycle (October – October)

EXPECTATIONS. It is expected that the mentor will provide professional and educational development advice, guidance, professional contacts and networking connections as appropriate and that both parties will work together to develop the participant's Individual Development goals.

PARTICIPATE IN REGULARLY SCHEDULED MEETINGS. Both parties agree to meet regularly, at least 1-2 hours per month and engage in supplemental meetings as necessary and as each party availability permits.

PARTICIPATE IN THE PROGRAM TRAINING INITIATIVES. Unless otherwise approved by the program coordinator, both parties agree to complete the program-training plan as developed by the program coordinator.

PARTICIPATE IN THE PROGRAM ASSESSMENT PROCESSES. Both parties agree to complete the mid, end and post program assessments as developed by the program coordinator.

Forward a signed copy of this form to Pamela K. Null, email – mailto:pamela.null@usmc.mil

Action Plan

_____ Mentor's Name

_____ Mentee's Name

_____ Beginning Date

To be jointly developed by Mentor and Mentee. This form should be completed in stages.
****At the beginning of your relationship you should complete the first section with the objectives and goals.**
****Mid way through the year (approximately six months) evaluate your progress and complete the second part of the plan.**
****The end of the year summarizes your accomplishments.**

You are required to submit the appropriate part of the form, three times a year to the Domain Mentor Representative and Pam Null (beginning, mid and end of the year).

Statement of Objective (what do you hope to accomplish during the period of mentoring- e.g., start college, learn specific skill set, network in a different business area):

Goals (steps) will you set to accomplish the Objective:

- **Step 1** (who will do what by when):
- **Step 2:**
- **Next Steps:**

Define Success for accomplishing your Objective? (What does success look like, i.e. new job, degree completion, join a professional organization, and complete a certification)

Signature of Mentor:_____

Signature of Mentee:_____

Mid Year Review

_____
Date

What accomplishments have been made to achieve your objective and goals? (Explain the actions taken, who helped you, the dates you accomplished)

Accomplishments:

-
-
-
-
-
-
-

Other Comments:

Signature of Mentor:_____

Signature of Mentee:_____

Summary of Accomplishments:

Signature of Mentor:_____

Signature of Mentee:_____

APPENDIX D. MILITARY OFFICER PAY TABLES

BASIC PAY—EFFECTIVE JANUARY 1, 2009												
Pay Grade	2 or less	Over 2	Over 3	Over 4	Over 6	Over 8	Over 10	Over 12	Over 14	Over 16	Over 18	Over 20
O-10[2]												14,688.60
O-9												12,846.90
O-8	9,090.00	9,387.60	9,585.30	9,640.50	9,887.10	10,299.00	10,395.00	10,786.20	10,898.10	11,235.30	11,722.50	12,172.20
O-7	7,553.10	7,904.10	8,066.40	8,195.40	8,429.10	8,660.10	8,926.80	9,192.90	9,460.20	10,299.00	11,007.30	11,007.30
O-6	5,598.30	6,150.30	6,553.80	6,553.80	6,578.70	6,860.70	6,897.90	6,897.90	7,290.00	7,983.30	8,390.10	8,796.60
O-5	4,666.80	5,257.20	5,621.40	5,689.80	5,916.60	6,052.80	6,351.60	6,570.60	6,853.80	7,287.30	7,493.40	7,697.40
O-4	4,026.90	4,661.40	4,972.20	5,041.80	5,330.40	5,640.00	6,025.20	6,325.50	6,534.30	6,654.00	6,723.30	6,723.30
O-3	3,540.30	4,013.40	4,332.00	4,722.90	4,948.80	5,197.20	5,358.00	5,622.30	5,759.70	5,759.70	5,759.70	5,759.70
O-2	3,058.80	3,483.90	4,012.50	4,148.10	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30
O-1	2,655.30	2,763.60	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50
O-3[3]				4,722.90	4,948.80	5,197.20	5,358.00	5,622.30	5,844.90	5,972.70	6,146.70	6,146.70
O-2[3]				4,148.10	4,233.30	4,368.30	4,595.70	4,771.50	4,902.30	4,902.30	4,902.30	4,902.30
O-1[3]				3,340.50	3,567.60	3,699.30	3,834.30	3,966.60	4,148.10	4,148.10	4,148.10	4,148.10
W-5												6,505.50
W-4	3,658.50	3,935.70	4,048.80	4,159.80	4,351.20	4,540.50	4,732.20	5,021.10	5,274.00	5,514.60	5,711.40	5,903.40
W-3	3,340.80	3,480.30	3,622.80	3,669.90	3,819.60	4,114.20	4,420.80	4,565.10	4,731.90	4,904.10	5,213.10	5,422.20
W-2	2,956.50	3,236.10	3,322.20	3,381.60	3,573.30	3,871.20	4,018.80	4,164.30	4,341.90	4,480.80	4,606.80	4,757.10
W-1	2,595.30	2,874.00	2,949.60	3,108.30	3,296.10	3,572.70	3,701.70	3,882.30	4,059.90	4,199.40	4,328.10	4,484.40

Table 32. 2009 Military Officer Basic Pay Table[9]

9. Table 29 is adapted from the 2009 Military Pay Table from www.dfas.mil.

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX E. CONSUMER PRICE INDEX

CPI Tables (Base Year 1982)[10]							
All Items, All Urban Consumers				College Tuition & Fees			
Year	CPI	f(82)	f(09)	Year	CPI	f(82)	f(09)
1998	163.000	0.592025	1.689119	**1998**	306.508	0.294690	3.393394
1999	166.600	0.579232	1.726425	**1999**	318.633	0.283480	3.527632
2000	172.200	0.560395	1.784456	**2000**	331.800	0.272230	3.673402
2001	177.100	0.544890	1.835233	**2001**	348.733	0.259010	3.860873
2002	179.900	0.536409	1.864249	**2002**	372.542	0.242460	4.124458
2003	184.000	0.524457	1.906736	**2003**	403.750	0.223720	4.469970
2004	188.900	0.510852	1.957513	**2004**	442.050	0.204330	4.893994
2005	195.300	0.494112	2.023834	**2005**	475.075	0.190130	5.259618
2006	201.600	0.478671	2.089119	**2006**	507.908	0.178190	5.612049
2007	207.342	0.465415	2.148622	**2007**	538.641	0.167690	5.963370
2008	215.303	0.448206	2.231119	**2008**	572.235	0.157850	6.335286
2009	214.537	0.449806	2.223181	**2009**	606.611	0.148900	6.715873

Table 33. Consumer Price Indices

10. CPI numbers obtained from Bureau of Labor Statistics Web site (www.bls.gov/cpi/). f(82) and f(09) figures derived as described in Chapter V.

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF REFERENCES

Bates, R. W. (2010, January). *Program Management Career Development Guide: Version 4.* Unpublished.

Battaglia, P. (2004, March 25). [Welcome aboard brief for PMC 24 course offering]. Unpublished PowerPoint retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Battaglia, P. (2010, February). [Course description of Professional Certification in Program Management offered by Florida Institute of Technology]. Unpublished raw data.

Battaglia, P. (2010, February). [Course tuition and enrollment breakdown of Professional Certification in Program Management offered by Florida Institute of Technology]. Unpublished raw data.

Boudreau, M. W. (2008). *MN3331 Principles of System Acquisition and Program Management – Course Syllabus Summer Quarter, AY2008* [Data file]. Retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Bureau of Labor Statistics. (n.d.). *Consumer Price Index (CPI).* Retrieved from http://www.bls.gov/cpi/, February 4, 2010.

Cuskey, J. R. (2009). *MN3331 Principles of System Acquisition and Program Management – Course Syllabus Fall Quarter, AY2009* [Data file]. Retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Defense Acquisition University. (n.d.). *ACQ 101 – Fundamentals of Systems Acquisition Management.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *ACQ 201A – Intermediate Systems Acquisition, Part A.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *ACQ 201B – Intermediate Systems Acquisition, Part B.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *CLB 007 – Cost Analysis.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *CLB 016 – Introduction to Earned Value Management.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *CLC 007 – Contract Source Selection.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *CLE 003 – Technical Reviews.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *CON 110 – Mission-Support Planning.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *IRM 101 – Basic Information Systems Acquisition.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *LOG 101 – Acquisition Logistics Fundamentals.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *LOG 102 – Systems Sustainment Management Fundamentals.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *PMT 250 – Program Management Tools.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *PQM 103 – Defense Specification Management.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *SAM 101 – Basic Software Acquisition Management.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *SYS 101 – Fundamentals of Systems Planning, Research, Development, and Engineering.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (n.d.). *TST 102 – Fundamentals of Test and Evaluation.* Retrieved from DAU's iCatalog at http://icatalog.dau.mil/onlinecatalog/courses.aspx, April 15, 2010.

Defense Acquisition University. (2008, August 6). *Certification Standards & Core Plus Development Guide; Program Management Level 1* [Data file]. Retrieved from Defense Acquisition University online catalog Web site, http://icatalog.dau.mil/onlinecatalog/CareerLvl.aspx, May 14, 2010.

Defense Acquisition University. (2010, April 27). *Certification Standards & Core Plus Development Guide; Program Management Level 2* [Data file]. Retrieved from Defense Acquisition University online catalog Web site, http://icatalog.dau.mil/onlinecatalog/CareerLvl.aspx, May 14, 2010.

Defense Acquisition University: Mission – Vision Statement. (n.d.). Retrieved from http://www.dau.mil/aboutDAU/Pages/mission.aspx, August 20, 2009.

Dillard, J., & Naegle, B. (2008, July). [FY 2008 Cost Proposal and Statement of Work from Naval Postgraduate School for execution of the Advanced Acquisition Program]. Unpublished raw data retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Dillard, J., & Naegle, B. (2009). [FY 2010 Cost Proposal and Statement of Work from Naval Postgraduate School for execution of the Advanced Acquisition Program]. Unpublished raw data retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

DSMC Commandants, A Brief History. (2001, May 1). *Program Manager.* 11-19.

Feigley, J.M. (2000, October 6). *Command Policy Letter No. 4-00: Utilizing Duty Hours for Developmental Activities.* Unpublished.

Firth, A. (2006). [PMC attendance analysis from 2002 to 2006]. Unpublished raw data retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Marine Corps Logistics Command, Communications Office. (2009). Marine Corps Logistics Command. *Program Executive Officer, Land Systems, Marine Corps, 2nd Anniversary, 2009/2010 Edition,* 24-26.

Marine Corps Systems Command, Corporate Communications. (n.d.). *The Marine Corps Systems Command New Employee Handbook.* Unpublished.

Marine Corps Systems Command, Corporate Communications. (2009, August). *Command Overview: Equipping Warfighters to Win* [PowerPoint file]. Unpublished.

Marine Corps Systems Command, FIT Attendance from 2002 to January 2006. (n.d.). [Data file]. Retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Marine Corps Systems Command, Mentor Program Guide, 2009-2010. (n.d.). [Data file]. Retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Marine Corps Systems Command, Workforce Development. (n.d.). *Acculturation, Civilian Supervisory Development Program, Executive Leadership Development Program, Mentor Program* [Brochure]. Quantico, VA: Author.

Matthews, D. (2009). *MN3331 Principles of System Acquisition and Program Management – Course Syllabus Spring Quarter, AY2009* [Data file]. Retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Naval Postgraduate School. (2006, October). *Advanced Acquisition Program (AAP) Brief* [Data file]. Retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Naval Postgraduate School. (2009, February 26). *Naval Postgraduate School, Academic Calendar* [Data file]. Retrieved from http://www.nps.edu/Academics/GeneralCatalog/Home.htm, March 4, 2010,

Project Management Institute, Inc. (2008). A *Guide to the Project Management Body of Knowledge (PMBOK Guide),* 4th Edition. Newton Square, PA: Author.

Sims, K. (n.d.). [Justification to receive funding from DACM for tuition payment of the Advanced Acquisition Program]. Unpublished raw data retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Sims, K. (n.d.). *Supervisor Endorsement, Advanced Acquisition Program MN3331* [Data file]. Retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Sims, K. (2007, Fall) [AAP Fall 2007 graduating class roster]. Unpublished raw data retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Sims, K. (2008, Summer) [AAP Summer 2008 graduating class roster]. Unpublished raw data retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Sims, K. (2008, Fall) [AAP Fall 2008 graduating class roster]. Unpublished raw data retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Sims, K. (2009, Spring) [AAP Spring 2009 class enrollment roster]. Unpublished raw data retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Sims, K. (2009, Fall) [AAP Fall 2009 class enrollment roster]. Unpublished raw data retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

Snider, K. (2007, Fall). *MN3331 Principles of System Acquisition and Program Management – Course Syllabus Fall Quarter, AY2007* [Data file]. Retrieved from MARCORSYSCOM Workforce Management and Development Office, August 20, 2009.

U.S. General Accounting Office. (1992, January). *DEFENSE MANAGEMENT: Implementation of the Defense Acquisition Workforce Improvement Act* (GAO Publication No. B-247174). Washington, DC: Author.

Vaughan, J. J., Franklin, B. D., & Col Augustin, W. H. (2003, April). *Comparative Analysis of Level I and Level II Acquisition Courses Offered by the Defense Acquisition University and the Florida Institute of Technology* [Data file]. (Available from Marine Corps Systems Command, Program Manager for Training Systems, 12350 Research Parkway, Orlando, FL 32826-3275)

The White House, Office of the Press Secretary. (2009, March 4). *Memorandum for the Heads of Executive Department Agencies, Subject: Government Contracting* [Data file]. Available from the White House Web site, http://www.whitehouse.gov

Wynne, M. (2005, March 7). *MEMORANDUM: Revision to DoD Earned Value Management Policy*. Washington, DC: Under Secretary of Defense.

THIS PAGE INTENTIONALLY LEFT BLANK

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center
   Ft. Belvoir, Virginia

2. Dudley Knox Library
   Naval Postgraduate School
   Monterey, California

3. Commander
   Marine Corps Systems Command
   Quantico, Virginia

4. Director, Workforce Management & Development
   Marine Corps Systems Command
   Quantico, Virginia

5. Paul Battaglia
   Associate Professor & Director, National Capital Region Site
   Florida Institute of Technology
   Alexandria, Virginia

6. Joseph R. Shusko
   Marine Corps Systems Command
   Quantico, Virginia